NAVAL POSTGRADUATE SCHOOL MONTEREY, CALIFORNIA





*Original contains color plates: All DTIC reproductations will be in black and white:

THESIS

A DESIGN AND PERFORMANCE ANALYSIS FOR THE HOT PRIMARY HEAT EXCHANGER (HPX) USING NUMERICAL ANALYSIS

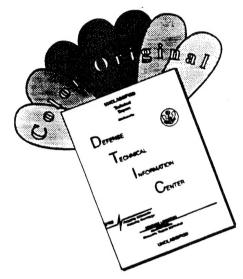
> by Kevin Scott Muhs June, 1995

Thesis Advisor:
Thesis Co-Advisor:

Ronald J. Pieper Ashok. Gopinath

Approved for public release; distribution is unlimited.

DISCLAIMER NOTICE



THIS DOCUMENT IS BEST QUALITY AVAILABLE. THE COPY FURNISHED TO DTIC CONTAINED A SIGNIFICANT NUMBER OF COLOR PAGES WHICH DO NOT REPRODUCE LEGIBLY ON BLACK AND WHITE MICROFICHE.

REPORT DOCUMENTATION PAGE

Form Approved OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Burdent Property Reduction Project (0704-0188) Washington DC 20503.

and B	udget, Paperwork Reduction Project (0/04-0100)	AA WRITTI	igion DC 20003.				
1.	AGENCY USE ONLY (Leave blank)	2.	REPORT DATE June 1995	3.	REPOR Maste		YPE AND DATES COVERED Thesis
4.	TITLE AND SUBTITLE A Design Hot Primary Heat Exchanger (H	and I	Performance Analysis turning Numerical Analysis	for th	ne	5.	FUNDING NUMBERS
6.	AUTHOR(S) Kevin Scott Muhs						
7.	PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey CA 93943-5000			8.	PERFORMING ORGANIZATION REPORT NUMBER		
9.	SPONSORING/MONITORING AGEN	ICY N	NAME(S) AND ADDRESS	(ES)		10.	SPONSORING/MONITORING AGENCY REPORT NUMBER
11.	 SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government. 						
12a.	DISTRIBUTION/AVAILABILITY ST Approved for public release; dis					12b	. DISTRIBUTION CODE

13. ABSTRACT (maximum 200 words)

The Hot Primary Heat Exchanger (HPX), a key component of the ThermoAcoustic Life Sciences Refrigerator, consists of a tube and fin design. The tubing is bent into a serpentine pattern and overlayed on a screen of copper fins. The serpentine pattern results in several flow reversals and complex internal flow geometries within the heat exchanger. The fins are not consistently of uniform length and generally have heat rejection at both ends. This design results in a forced-cooled, single stack cold plate configuration with unequal temperatures at each end of the fin. The analysis of this configuration requires a methodology based upon the existence of an adiabatic point somewhere along the fin between the prime surfaces. Once the location of this adiabatic point is known, the cold plate may be treated on the basis of two isolated surfaces having fins with adiabatic tips. The goal of this thesis is to provide design analysis and performance predictions for the Hot Primary Heat Exchanger (HPX) using numerical analysis of the tube and fin arrangement of the HPX.

14.	14. SUBJECT TERMS Heat Exchange, Fin Analysis, Fin Efficiency			15.	NUMBER OF	
						PAGES 173
			•		16.	PRICE CODE
17.	SECURITY CLASSIFI-	18. SECURITY CLASSIFI-		SECURITY CLASSIFI- CATION OF ABSTRACT	20.	LIMITATION OF ABSTRACT
	CATION OF REPORT	CATION OF THIS PAGE	1			
	Unclassified	Unclassified		Unclassified		UL

NSN 7540-01-280-5500 Standard Form 298 (Rev. 2-89)

Approved for public release; distribution is unlimited.

A DESIGN AND PERFORMANCE ANALYSIS FOR THE HOT PRIMARY HEAT EXCHANGER (HPX) USING NUMERICAL ANALYSIS

Kevin S. Muhs
Lieutenant, United States Navy
B.S., University of Washington, 1987

Submitted in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE IN MECHANICAL ENGINEERING MASTER OF SCIENCE IN ASTRONAUTICAL ENGINEERING

from the

NAVAL POSTGRADUATE SCHOOL

Author:

Kevin Scott Muhs

Ronald J. Pieper Thesis Advisor

Ashok Gopinath, Co-Advisor

Mattle Lell

Matthew D. Kelleher, Chairman

Department of Mechanical Engineering

Daniel J. Collins, Chairman

Department of Aeronautics and Astronautics

ABSTRACT

The Hot Primary Heat Exchanger (HPX), a key component of the ThermoAcoustic Life Sciences Refrigerator, consists of a tube and fin design. The tubing is bent into a serpentine pattern and overlayed on a screen of copper fins. The serpentine pattern results in several flow reversals and complex internal flow geometries within the heat exchanger. The fins are not consistently of uniform length and generally have heat rejection at both ends. This design results in a forced-cooled, single stack cold plate configuration with unequal temperatures at each end of the fin. The analysis of this configuration requires a methodology based upon the existence of an adiabatic point somewhere along the fin between the prime surfaces. Once the location of this adiabatic point is known, the cold plate may be treated on the basis of two isolated surfaces having fins with adiabatic tips. The goal of this thesis is to provide design analysis and performance predictions for the Hot Primary Heat Exchanger (HPX) using numerical analysis of the tube and fin

arrangement of the HPX.

Accesio	n For		
NTIS CRA&I DTIC TAB Unannounced Justification			
By Distribution /			
Availability Codes			
Dist	Avail ar Spec		
A-1			

v

TABLE OF CONTENTS

I. INTRODUCTION	1
II. HEAT TRANSFER FROM EXTENDED SURFACES	5
A. BASIC HEAT TRANSFER CONCEPTS	5
B. FIN CONCEPTS	7
C. FIN ANALYSIS WITH AXISYMMETRIC HEAT LOADING .	13
III. THE THERMOACOUSTIC LIFE SCIENCES REFRIGERATOR	21
A. THERMAL SYSTEMS OVERVIEW	21
B. THE HOT PRIMARY HEAT EXCHANGER (HPX)	22
C. COMPUTER MODELING OF THE HEAT TRANSFER	
PROCESS	28
IV. PERFORMANCE ANALYSIS	31
A. HOT PRIMARY GAS SIDE HEAT TRANSFER COEFFICIENT	
DETERMINATION	31
B. TEMPERATURE EXCESS DETERMINATION	34
V. EFFECTS OF TEMPERATURE EXCESS RATIO VARIATIONS	41
VI. RESULTS	49
A. PROGRAM OUTPUT	49
VII. SUMMARY AND CONCLUSIONS	55

Α.	DESIGN EFFECTIVENESS	55
В.	EFFECTIVENESS OF SINGLE STACK COLD PLATE	
	ANALYSIS	56
С.	EFFECTIVENESS OF COMPUTER MODELING	56
D.	VALIDITY OF PERFORMANCE ANALYSIS	57
APPENDIX	A. MURRAY-GARDNER ASSUMPTIONS	59
APPENDIX	B. TRANSFORMATION MATRIX DEVELOPMENT	61
APPENDIX	C. NODAL MODELING DATA	65
APPENDIX	D. SPREADSHEET K-VALUE DETERMINATION AND NODE	
	CONNECTION DATA	69
APPENDIX	E. TASS NODAL TEMPERATURE OUTPUT	151
LIST OF R	REFERENCES	157
INITIAL D	DISTRIBUTION LIST	159

LIST OF SYMBOLS, ACRONYMS, AND/OR ABBREVIATIONS

ROMAN LETTER SYMBOLS

A area of heat flow path	
b fin height [m]	
c specific heat capacity [kJ/kg-K]	
d diameter [m]	
h heat transfer coefficient [W/m ² -K]	
<pre>K node conductance matrix</pre>	
K elements of the matrix K	
<pre>k thermal conductivity [W/m-K]</pre>	
L length of channel (fin length) [m]	
ΔL length between conductance nodes [m]	
m fin performance factor [m]	
n number of fins	
Nu Nusselt number [dimensionless]	
P wetted perimeter [m]	
Pr Prandtl number [dimensionless]	
q heat flow [W]	
R radius [m]	
Re Reynolds number [dimensionless]	
R ₀ temperature excess ratio [dimension]	ess]
T temperature [°C]	
ΔT temperature difference [°C]	
t elements of the temperature matrix T	
w weight flow [kg/hr]	
Y thermal admittance [W/K]	

GREEK LETTER SYMBOLS

β	a linear transformation matrix
Y	element of the matrix $oldsymbol{\Gamma}$
Γ	a linear transformation matrix
ð	fin width or thickness [m]
θ	temperature excess [K]
Λ	$\Lambda = e^{mb}$
μ	dynamic viscosity
τ	element of the matrix B

SUBSCRIPTS

a	designates fin tip '.
avg	designates average
b	designates fin base
С	designates cross-sectional area
cond	designates heat flow due to conductivity
conv	designates heat flow due to convection
е	designates effective diameter
f	designates fin surface
F	designates fluid quantities

ideal		ideal values
in		input condition
inner		inner radius
max	designates	maximum quantity
0	designates	characteristic value
outer		outer radius
p		prime surface
s	designates	surface area

ACRONYMS

CPX	Cold Primary Heat Exchanger
EHX	Experimental Heat Exchanger
HPX	Hot Primary Heat Exchanger
IRE	Insulated Refrigeration Enclosure
TALSR	ThermoAcoustic Life Sciences Refrigerator

ACKNOWLEDGMENT

The author would like to gratefully acknowledge the high quality guidance and technical assistance provided in the completion of this thesis by Professors Pieper and Kraus of the Electrical Engineering department. In addition, Professor Gopinath of the Mechanical Engineering department and Professor Biblarz of the Aeronautical Engineering curriculum provided many valuable suggestions.

The moral support and technical assistance of fellow students also assisted the author in this endeavor. Specifically, David Nash is responsible for the high quality graphics drawings, and Dan Rosser offered mathematical guidance and acted as a sounding board for a variety of my ideas.

The greatest portion of appreciation goes to the authors' family, Tammy, Anna Marie, and Bradley, for enduring long hours, schedule conflicts, missed events and high stress levels.

Thanks to one and all, and thanks to the Lord who has given me the privilege of knowing and working with each of the aforementioned individuals.

I. INTRODUCTION

The Hot Primary Heat Exchanger (HPX), a key component of the ThermoAcoustic Life Sciences Refrigerator (TALSR), consists of a tube and fin design. The tubing is bent into a serpentine pattern and overlayed on a screen of copper fins. This configuration results in several flow reversals and complex internal gas side flow geometries within the heat exchanger. The fins are not consistently of uniform length and generally have heat rejection at unequal temperatures on each end of the fin. This design results in a forced-cooled, single stack cold plate configuration. The TALSR uses forced convection with an acoustic oscillator providing internal flow through channels created within the configuration of the HPX.

The first formal analyses of the cold plate configuration was provided by Mark and Stephenson (1954) and Kraus (1961). These analyses provided expressions for the efficiency of the cold plate for the case of heat loading on one side. Subsequently, Kern and Kraus (1972) looked at the single stack cold plate with heat input on only one, and on both sides. Incropera and Dewitt (1981) presented a classical textbook culmination of extended surface research and general conduction analysis for fins of uniform cross-sectional area. An application of extended surface principles and research was used by Garrett (1992) to evaluate the forced convective thermal performance of the HPX. Most recently, Pieper and

Kraus (1995) looked at the cold plate configuration with asymmetric heat loading and proposed dividing the plate into two fins, each possessing an adiabatic tip for analysis purposes. This permits a more accurate representation of the performance of the cold plate configuration.

The goal of this thesis is to utilize the results of Pieper and Kraus (1995) to provide design analysis and performance predictions for the Hot Primary Heat Exchanger (HPX) using a numerical optimization of the serpentine tube and fin arrangement in the HPX.

The serpentine pattern of the copper tubing in the HPX is unique when compared to a majority of the tube and fin heat exchangers currently in use. A vast majority of current applications involve parallel fluid flow in tubes through a matrix of fins to provide the required heat transfer. This results in fairly uniform base temperatures at each end of the fin. In contrast, the serpentine tubing in the HPX results in non-uniform base temperatures due to increasing temperatures along the length of the tube. Research into the thermal performance of a non-uniform base temperature design is limited and on-going, however, a successful application of this configuration has been achieved on a large scale at the WyoDak energy facility in Gillete Wyoming, shown in Figure 1.

Chapter II of this thesis is used to present fundamental heat transfer concepts, and extended surface evaluation techniques. Chapter III provides a physical description of

the ThermoAcoustic Life Sciences Refrigerator (TALSR) and discusses the role of the Hot Primary Heat Exchanger in the heat transfer cycle of the TALSR. Chapter IV details the numerical simulation techniques used in the performance analysis of the HPX. Chapter V presents a discussion on efficiency modeling and the factors affecting extended surface efficiencies. Analysis results and conclusions are presented in Chapters VI, and VII respectively.

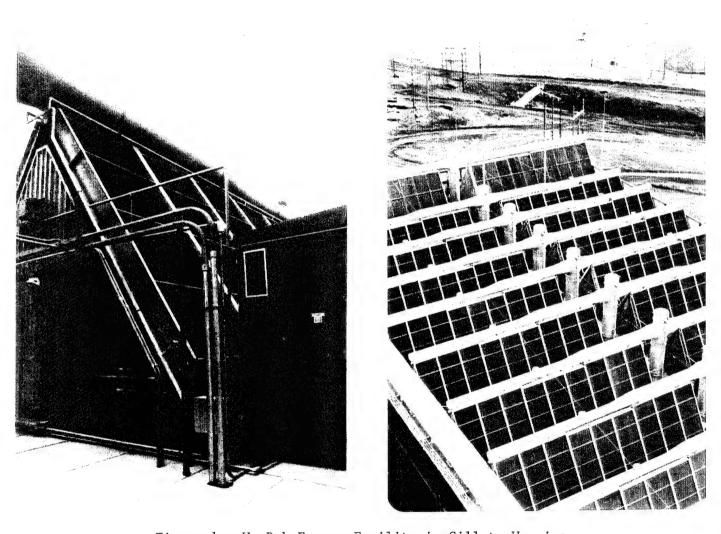


Figure 1: WyoDak Energy Facility in Gillete Wyoming

II. HEAT TRANSFER FROM EXTENDED SURFACES

The convective heat transfer rate of a bare surface may be increased by increasing the surface area through which the convection occurs. This may be accomplished by using surfaces that extend from the bare surface into the surrounding fluid. Naturally, a considerably larger amount of heat can be transferred from or to an extended surface in a given time period than from or to a bare surface. The type of extended surface most commonly used, is termed a fin. The thermal conductivity of the fin material has a strong effect on the temperature distribution along the fin and therefore influences the degree to which the heat transfer rate is enhanced.

A. BASIC HEAT TRANSFER CONCEPTS

Conduction is the heat flow mechanism whereby heat is transferred by molecular diffusion from one part of a medium under the influence of a temperature gradient without a net displacement of the particles that compose the medium. It was Fourier who proposed that the heat flow is directly proportional to the area of the heat flow path and the temperature gradient along the path,

$$q \propto A(dT/dx)$$
 (2.1)

Insertion of a proportionality constant yields:

$$q_{cond} = -kA(dT/dx)$$
 (2.2)

where,

A = area of the heat flow path

k = thermal conductivity of the material

(dT/dx) = change in temperature per unit length The minus sign assures a positive heat flow in the presence of the required negative temperature gradient.

Convection is a fluid flow process that results in the transfer of heat from or to a confining surface by a flowing fluid. The fluid flow may be induced by buoyancy, density gradients or through the use of mechanical methods. Those methods utilizing mechanical flow generation are termed forced convection.

A second classification of convective heat transfer is as either internal or external. In internal flow the fluid is constrained on all sides by solid boundaries, as in flow through a pipe. In external flow the fluid has at least one side extending to infinity without encountering a solid surface. Heat flow during convection is directly proportional to the temperature difference between the confining surface and the surface area over which the process takes place:

$$q \propto A \Delta T$$
 (2.3)

Insertion of a proportionality factor yields,

$$q_{conv} = hA \Delta T \qquad (2.4)$$

Equation (2.4) is Newton's law of cooling and h is called the convection heat transfer coefficient and encompasses all the effects that influence the convection mode.

B. FIN CONCEPTS

To determine the heat transfer rate associated with a fin, the temperature distribution along the fin must first be In the temperature distribution analysis, some obtained. standard assumptions are made. First, radiation effects are neglected. In addition, the fin is assumed to comply with the well known Murray (1938) and Gardner (1945) assumptions listed in Appendix A. The one dimensional assumption of Murray-Gardner is valid because in most extended surface applications the fins are relatively very thin compared to their height. Thus, the temperature changes in the longitudinal direction are much larger than those in the transverse direction and the one dimensional assumption is satisfactory. The material used in the construction of the fin is characterized by a thermal conductivity, k. It is also assumed that the heat transfer coefficient due to convection, h, is known. following the standard, steady state fin characterization of Incropera and Dewitt (1981), it is found that;

$$(k) d(A_c(x) dT/dx)/dx - (h) (dA_s(x)/dx) (T - T_e) = 0$$
 (2.5)

where A_c is the cross-sectional area, and A_s is the surface

area, both of which may vary with x. Equation (2.5) may be simplified by defining a temperature excess, θ , as,

$$\theta(x) = T(x) - T_{\omega} \qquad (2.6)$$

where because T_o is a constant, $d\theta/dx = dT/dx$. Substituting Equation (2.6) into Equation (2.5), results in;

$$(k) d(A_c(x) d\theta(x)/dx)/dx - (h) (dA_s(x)/dx) \theta(x) = 0$$
 (2.7)

To determine the temperature distribution along the length of an individual fin, it is necessary to solve Equation (2.7) for the specific fin geometry.

For the case of an individual rectangular fin of length b, as shown in Figure 2, consider that the origin of the coordinate is at the fin tip with positive orientation toward the fin base. The fin width is a constant, δ , therefore A_c is a constant and $A_s = Px$, where A_s is the surface area measured from the tip to x and P is the fin perimeter. Thus, $(dA_c/dx) = 0$ and $(dA_s/dx) = P = (2L + 2\delta) = 2L$ and Equation (2.7) reduces to;

$$d^2\theta/dx^2 - m^2\theta = 0$$
 (2.8)

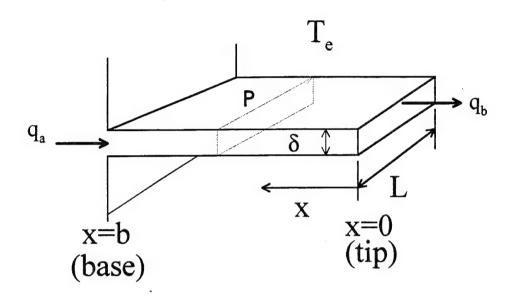


Figure 2: Rectangular longituidinal fin of length b.

where

$$m^2 = 2h/k\delta (2.9)$$

Equation (2.8) is a linear, homogenous, second-order differential equation with constant coefficients. Its general solution is of the form;

$$\theta(x) = C_1 e^{mx} + C_2 e^{-mx}$$
 (2.10)

By substitution, it is easily verified that Equation (2.10) is a solution to Equation (2.8).

To evaluate the constants C_1 and C_2 of Equation (2.10), it is necessary to specify initial value data;

$$\theta(x = b) = \theta_b$$

(2.11)

and

$$q(x = b) = q_b$$

This makes

$$\theta_{\rm b} = C_1 e^{\rm mb} + C_2 e^{-\rm mb}$$
 (2.12)

and applying $q_b = kA(d\theta_b/dx)$ gives

$$\mathbf{q}_{b} = \mathbf{k} \delta \mathbf{m} \mathbf{L} [\mathbf{C}_{1} \mathbf{e}^{\mathbf{m}b} - \mathbf{C}_{2} \mathbf{e}^{-\mathbf{m}b}]$$
 (2.13)

or

$$q_b = Y_o[C_1e^{mb} - C_2e^{-mb}]$$
 (2.14)

where $Y_{\circ} = k\delta mL$, is called the characteristic thermal admittance of the fin and has the units W/°C.

It is then a matter of algebra to evaluate the constants C_1 and C_2 such that;

$$\theta(x) = \theta_b \cosh(m[b-x]) - (q_b/Y_o) \sinh(m[b-x]) \qquad (2.15)$$

and

$$q(x) = \theta_b Y_o \sinh(m[b-x]) + q_b \cosh(m[b-x])$$
 (2.16)

Now that the temperature excess and heat flow at any point in the fin have been evaluated, a convenient method of mapping conditions at the fin tip to conditions at the fin base is desired.

For individual fins, Kraus et al. (1978) showed that conditions of heat flow and temperature excess (relative to the presumed constant and uniform temperature environment) at any point on a fin are induced by similar conditions at the fin base. This resulted in the development of a linear transformation that mapped conditions at the fin tip to conditions at the fin base:

$$\begin{bmatrix} \theta_b \\ Q_b \end{bmatrix} = \beta \begin{bmatrix} \theta_a \\ Q_a \end{bmatrix} = \begin{bmatrix} \tau_{11} & \tau_{12} \\ \tau_{21} & \tau_{22} \end{bmatrix} \begin{bmatrix} \theta_a \\ Q_a \end{bmatrix}$$
 (2.17)

where the matrix β is called the inverse thermal transmission matrix. Its elements are designated as the inverse thermal transmission parameters. A summary of this work is provided in Appendix B.

Applying the development of Kraus et al. (1978) to the rectangular fin of Figure 2, it is seen that the inverse thermal transmission matrix is given by

$$\beta = \begin{bmatrix} \cosh mb & (Z_o) (\sinh mb) \\ Y_o (\sinh mb) & \cosh mb \end{bmatrix}$$
 (2.18)

where $Y_o = (2hk\delta)^{1/2}L$, $Z_o = 1/Y_o$, and k, L, h, and δ are the thermal conductivity, fin length, heat transfer coefficient, and fin thickness respectively. Thus, this matrix can be used to map conditions at the fin tip to conditions at the fin base

$$\begin{bmatrix} \theta_b \\ q_b \end{bmatrix} = \begin{bmatrix} \cosh mb & (Z_o) (\sinh mb) \\ Y_o (\sinh mb) & \cosh mb \end{bmatrix} \begin{bmatrix} \theta_a \\ q_a \end{bmatrix}$$
 (2.19)

In addition to developing the linear transformation matrices, Kraus et al. (1978) also proposed that the conventional fin efficiency be abandoned and that single fins be characterized by a single parameter called the thermal transmission ratio, the ratio of the heat entering the fin to the temperature excess at the base of the fin. This was later called the fin input admittance [Kraus (1982)] and was given in the form of a bilinear transformation;

$$Y_{in} = q_b/\theta_a = (\tau_{21} + (q_a/\theta_a)\tau_{22})/(\tau_{11} + (q_a/\theta_a)\tau_{12})$$
 (2.20)

The fin input admittance is particularly useful in the analysis and evaluation of finned arrays and will play an important role in the analysis of the HPX.

C. FIN ANALYSIS WITH AXISYMMETRIC HEAT LOADING

Consider the forced cooled cold plate shown in Figure 3 and observe that the single fin of total height b has been subdivided into two fins with fin heights b_1 and b_2 , to allow for the fact that the temperature differences at its opposite ends may not be equal. Note that the temperature excess, θ , is defined as the difference between the temperature at any point on the fin, T, and the temperature of the coolant fluid, T_{\bullet} , as given in Equation (2.6).

As shown in Figure 3, the origins of the fin height coordinates, x_1 and x_2 , are taken at the tips of fin 1 and fin

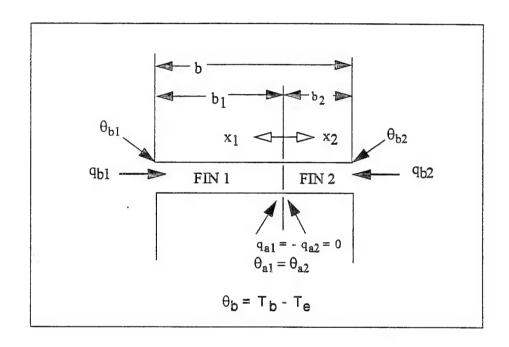


Figure 3: Forced cooled cold plate configuration used in axisymmetric heat loading analysis

2 with a positive orientation from fin tip to fin base. The fin heights, b_1 and b_2 , are chosen such that no heat crosses the interface between fin 1 and fin 2, thus creating an adiabatic fin tip condition. This is characterized by a linear transformation of Equation (2.19) for the longitudinal fin of rectangular profile shown, given by;

$$\begin{bmatrix} \theta_{b1} \\ q_{b1} \end{bmatrix} = \begin{bmatrix} \cosh mb_1 & Z_o(\sinh mb_1) \\ Y_o(\sinh mb_1) & \cosh mb_1 \end{bmatrix} \begin{bmatrix} \theta_{a1} \\ q_{a1} \end{bmatrix}$$
 (2.21)

and

$$\begin{bmatrix} \theta_{b2} \\ q_{b2} \end{bmatrix} = \begin{bmatrix} \cosh mb_2 & Z_o(\sinh mb_2) \\ Y_o(\sinh mb_2) & \cosh mb_2 \end{bmatrix} \begin{bmatrix} \theta_{a2} \\ q_{a2} \end{bmatrix}$$
 (2.22)

The cold plate configuration of Figure 3 is subject to the continuity and compatibility conditions at the interface between fins 1 and 2. These conditions require an adiabatic interface between b_1 and b_2 and are given in matrix form as;

$$\begin{bmatrix} \theta_{a1} \\ q_{a1} \end{bmatrix} = \begin{bmatrix} \theta_{a2} \\ -q_{a2} \end{bmatrix} = \begin{bmatrix} \theta_a \\ 0 \end{bmatrix}$$
 (2.23)

If $\theta_{b1} \neq \theta_{b2}$, symmetry will not apply and the fin height s b_1 and b_2 will not be equal $(b_1 \neq b_2)$.

In order to determine fin lengths b_1 and b_2 , Equations (2.21) and (2.22) may be expanded using the conditions of Equation (2.23). In particular with $\theta_{a1}=\theta_{a2}=\theta_a$, the following equations are derived,

$$\theta_{b1} = [\cosh mb_1]\theta_a \qquad (2.24)$$

$$\theta_{b2} = [\cosh mb_2]\theta_a \qquad (2.25)$$

Equation (2.24) and Equation (2.25) show that the base temperature excesses for b_1 and b_2 are related through θ_a , thus, a temperature excess ratio (R_θ) for a given cold plate configuration may be defined as:

$$R_{\theta} = \theta_{b1}/\theta_{b2} = [\cosh mb_1]/[\cosh mb_2] \qquad (2.26)$$

The hyperbolic cosines of Equation (2.26) can also be represented as exponentials;

$$R_{\theta} = (e^{mb1} + e^{-mb1})/(e^{mb2} + e^{-mb2})$$
 (2.27)

Using the observation from Figure 3, that $b_2 = b - b_1$, it is a matter of algebra to show that;

$$R_{\theta} = (\Lambda^2 + e^{2m(b2)})/(\Lambda[e^{2m(b2)} + 1])$$
 (2.28)

where

$$\Lambda = e^{mb} \qquad (2.29)$$

The value of b_2 for a given value of R_{θ} can then be found by re-arranging Equation (2.28) to provide;

$$b_2 = (1/2m) (ln[\Lambda(\Lambda - R_0)/(R_0\Lambda - 1)])$$
 (2.30)

An evaluation of R_{θ} using Equation (2.30) confirms that if $R_{\theta}=1$ because $\theta_{b1}=\theta_{b2}$, then because of symmetry, b_2 must equal half of the total fin height. In addition, the value of R_{θ} for $b_2=0$ can be found directly from Equation (2.28),

$$(R_{\theta})_{max} = (\Lambda^2 + 1)/(2\Lambda)$$
 (2.31)

and similarly for $b_2=b$,

$$(R_{\theta})_{\min} = (2\Lambda)/(\Lambda^2 + 1)$$
 (2.32)

If R_{θ} is not within the domain of values specified by Equations (2.31) and (2.32) the fin is then treated as a single fin without an adiabatic point. However, for the HPX model, the R_{θ} values are always within this domain and the single fin analysis is not required.

Once b_2 is known, b_1 is easily found through a simple subtraction procedure $(b_1 = b - b_2)$. With both b_1 and b_2

known, the cold plate may be treated on the basis of two isolated surfaces having fins with adiabatic tips, treating each fin individually as though the other were not present. One surface is governed by b_1 with θ_{b1} specified, and the other is governed by b_2 with θ_{b2} specified. Thus, there are two entities, each with a prime surface and each with a fin, and these surfaces may be treated individually as if the other were not present.

The performance of each prime surface, and fin $(b_1 \text{ or } b_2)$ combination depends on the total input admittance of the pair. The total input admittance, Y_{in} , is just the sum of the prime surface and fin input admittances,

$$Y_{in} = Y_{in,p} + Y_{in,f}$$
 (2.33)

where the subscripts, p and f refer to the prime surface and the fin, respectively, and where both prime and fin base surfaces are operating at $\theta_{\rm b}$.

The prime surface input admittance is determined by its convective dissipation

$$Y_{in,p} = hS_p$$
 (2.34)

where as seen from Figure 4,

$$S_p = (W - \delta)L \qquad (2.35)$$

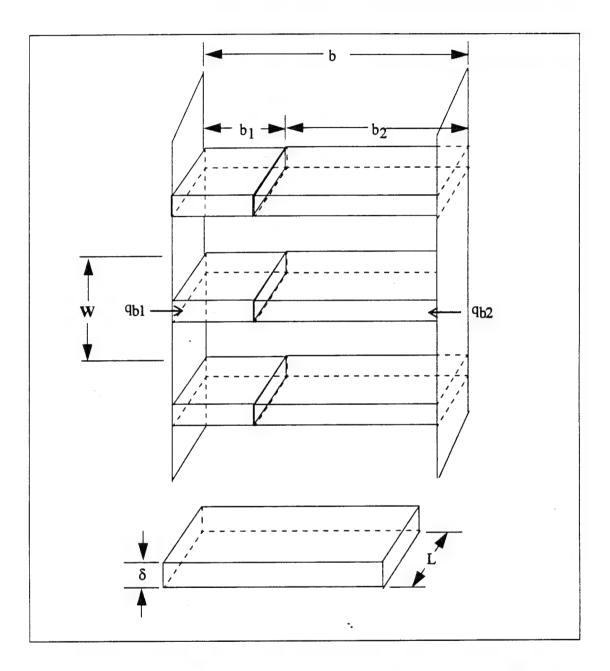


Figure 4: Schematic of single stack, cold plate heat transfer geometry.

which accounts for the footprint occupied by the fin.

The fin input admittance is derived from the fin β -matrix given by Equation (2.18). Because the height b_2 is based upon the determination of an adiabatic point, $Y_{in,f}$ is established by realizing that for $q_a = 0$ Equation (2.20) becomes;

$$Y_{in} = q_b/\theta_a = \tau_{21}/\tau_{11} = Y_o \sinh(mb)/\cosh(mb)$$
 (2.36)

which for the fin governed by b2, becomes

$$Y_{in,f} = Y_o \tanh(mb_2)$$
 (2.37)

Then, if the temperature excesses are specified so that R_{θ} leads to the establishment of b_2 , the heat dissipation is obtained from;

$$q_b = Y_{in}\theta_b \qquad (2.38)$$

This section provides the basis for an accurate thermal performance model needed in the simulation of the heat transfer process in the TALSR discussed in the next chapter.

III. THE THERMOACOUSTIC LIFE SCIENCES REFRIGERATOR

The ThermoAcoustic Life Sciences Refrigerator (TALSR), developed at Naval Postgraduate School, was motivated by the 512 vapor replace the Freon refrigeration system currently used on board the Space Shuttle. The TALSR provided a safer alternative due to the fact that it does not use chlorofluorocarbons (CFCs) and therefore could not potentially contaminate the small confined area of the Space Shuttle. In addition, the TALSR also provides the potential for higher reliability, over the current system, because it has no sliding seals and thus requires no lubrication. The ThermoAcoustic Life Sciences Refrigerator uses a complex thermal transport subsystem to remove heat from the Insulated Refrigeration Enclosure (IRE) of the Space Shuttle.

A. THERMAL SYSTEMS OVERVIEW

Heat is removed from the IRE by a Liquid-Air Heat Exchanger fabricated by the Modine Manufacturing Company. It is then transported through two thermoacoustic heat pumps, connected in series, by a mechanically pumped cold heat exchange fluid. The internal architecture of each heat pump consists of a Cold Primary Heat Exchanger (CPX), a Hot Primary Heat Exchanger (HPX), and an Electrodynamic Driver. The Electrodynamic Driver acoustically oscillates an internal

working fluid in each heat pump thereby creating internal gas side flow for both the HPX and the CPX. It is known that the heat transfer between surfaces can be enhanced using longitudinal acoustic waves [Vainshtein (1995)]. This internal gas side flow is used by the Cold Primary Heat Exchanger to remove heat from the cold-side exchange fluid, and transport it to the HPX. The HPX then transfers the heat removed from the cold-side exchange fluid into a secondary cooling loop. This secondary cooling loop transports the heat to the internal environment of the Space Shuttle via an Experimental Heat Exchanger (EHX). A schematic diagram of the series fluid flow through the TALSR thermal transport subsystem is shown in Figure 5 [Garrett (1992)].

B. THE HOT PRIMARY HEAT EXCHANGER (HPX)

The Hot Primary Heat Exchanger uses an acoustically oscillating medium to transport heat and must therefore be analyzed differently from most compact heat exchangers. The most significant difference between standard compact heat exchanger analysis and acoustical heat exchanger analysis is the fact that the acoustically oscillating gas parcels only move a limited distance before reversing their direction of flow. The consequence of this periodic flow reversal is that an increase in the effective surface area for heat transfer cannot arbitrarily be achieved by simply increasing the length of the heat exchange surfaces (fins) in the direction of flow.

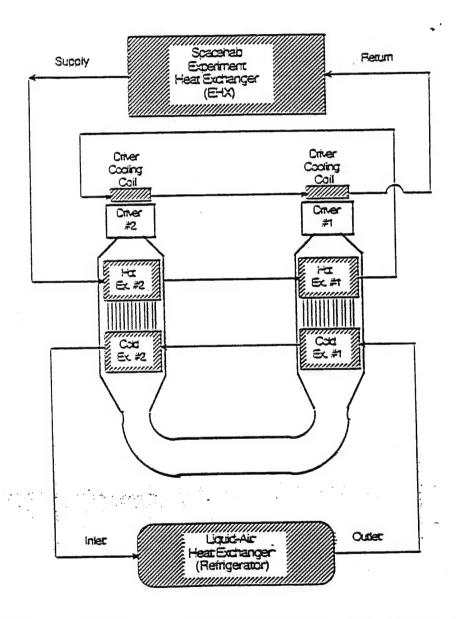


Figure 5: Schematic diagram of the series fluid flow through the Hot and Cold Primary Heat Exchangers. [Garrett (1992)]

Garrett (1992) has shown that the effective area over which heat transfer will take place is limited by the peak-to-peak excursions of the gas parcels over the heat exchange surface. Thus, heat exchange surfaces, which have a length in the flow direction equal to the peak-to-peak displacement of the gas, provide the maximum effective surface area for heat transfer.

The HPX utilizes copper tubing bent into a serpentine pattern and then soldered or furnace brazed on a screen of copper fins, as shown in Figure 6 [Garrett (1992)]. In this configuration, the fins are not of uniform length and for a majority of the fins, there is heat rejection at both ends. This design results in two parallel paths by which the fluid contained within the copper tubing can remove heat from the acoustically oscillating gas. The primary path is through the fins which are bonded to the tube. The fins represent the primary path because they have a greater surface area than the outside diameter of the tubing and because they are designed to have a length in the flow direction approximately equal to the peak-to-peak displacement of the gas. The secondary path is due to the direct convection of the gas around the tubing. This path also provides some useful heat transfer and requires consideration in the thermal analysis of the HPX. A schematic representation of the thermal resistances in the primary heat exchanger energy flow path is shown in Figure 7 [Garrett (1992)]. The tubing for the HPX is standard, circular crosssection, soft copper tubing, with an outer diameter (OD) of

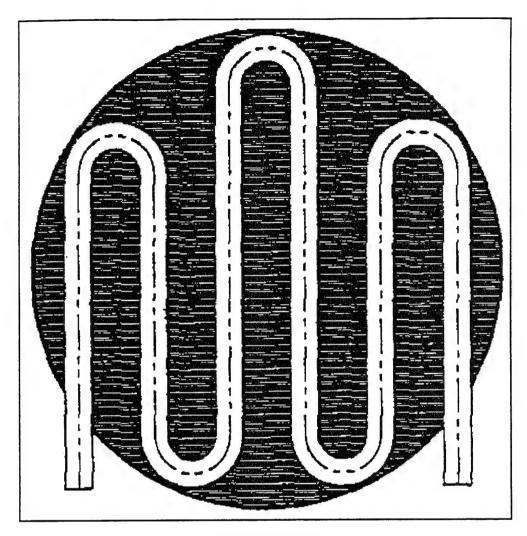


Figure 6: HPX design configuration [Garrett (1992)]

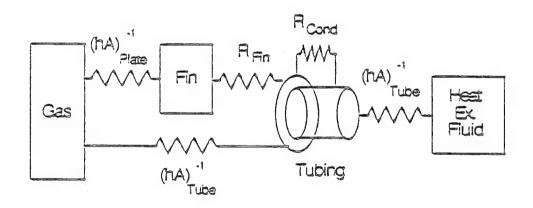


Figure 7: Schematic representation of thermal resistances in the HPX flow path. [Garrett (1992)]

0.635 cm and a wall thickness of 0.076 cm. The HPX has an inner diameter of 11 cm. Table 1 provides a list of the geometrical constraints and heat transfer characteristics used in the analysis of the HPX.

The physical design of the HPX can therefore be modeled as a forced-cooled, single stack cold plate configuration with unequal temperatures at each end of the fin. Thus, an analysis of the HPX can be completed using the derived relationships for cold plates with axisymmetric heat loading.

Symbol	Description	Value	Reference
Cp	specific heat capacity of water	4.182 kJ/kg-K	Incropera and Dewitt (1981)
δ	Fin thickness	0.0152 cm	Garrett (1992)
$\mathbf{h}_{ extsf{F}}$	Fluid heat transfer coefficient	12600 W/m ² -K	Garrett (1992)
k	thermal conductivity of copper	401 W/m-K	Garrett (1992)
L	Fin width (channel length)	0.3175 cm	Garrett (1992)
Pr	Prandtl number	0.7068	Garrett (1992)
Re	Reynolds number	1900	Garrett (1992)
R _{inner}	Inner radius of copper tubing	0.2413 cm	Garrett (1992)
R _{outer}	Outer radius of copper tubing	0.3175 cm	Garrett (1992)
μ	mean dynamic viscosity	. 190 x 10 ⁻⁷ N-s/m ²	Incropera and Dewitt (1981)
μ _s	surface dynamic viscosity	184 x 10 ⁻⁷ N-s/m ²	Incropera and Dewitt (1981)

Table 1: A summary of the physical constraints and heat transfer properties used in the analysis of the HPX

C. COMPUTER MODELING OF THE HEAT TRANSFER PROCESS

Once an accurate thermal model has been obtained, an efficient and reliable method of analyzing the heat transfer processes occurring within the heat exchanger is required. This is accomplished through the use of Steady State Thermal Analyzer software version 2.2 provided by InterCept Software. The model builder provides the user with the means to model the physical configuration of interest in order to provide the thermal analyzer with an input file. The thermal analyzer then takes the input file and produces an output file containing a summary of the temperatures within the configuration.

The model building process begins with a drawing of the configuration and a subdivision of it into small but finite subvolumes. Each subvolume is presumed isothermal and the centers of each subvolume are then representative of the entire subvolume. These centers are referred to as nodes and are connected to adjacent nodes through branches consisting of various forms of thermal conductance. These conductance forms are dependent on the mode of heat transfer between adjoining pairs of nodes. The various heat transfer modes available to the user include conduction, laminar free convection, radiation, forced convection, and fluid flow.

Each node can also be connected to a constant temperature, a constant heat input, or a temperature dependent heat input with an appropriate tag. Once a sketch

representation of the nodalized model is complete, the comprehensive node connection data is ready to be input into the model builder program. The input for the model builder program begins with node 1, and the user is asked for information for each connecting node with a greater number. For each connection to an adjacent node, the user must specify the mode of heat transfer with a tag number. After specifying the connecting node and tag, the user is queried as to the whether the conductance will be calculated, input directly, or is the same as an earlier branch. Conductance values are required for each node connection to any higher number node.

Subsequent use of the thermal analysis software results in the writing of n node equations in n unknown temperatures where the nodes are connected by the appropriate thermal conductances. The general solution strategy for these n equations is to then use the nodal conductances of the model to form a set of heat balance equations. In matrix form, this set of heat balance equations has the general form;

$$[K] [T] = [B]$$
 (3.1)

where K is the matrix of conductances, T is the node temperatures, and B is a matrix composed of constant temperature heat sinks, and/or heat inputs. Many of the conductances are linearized forms of nonlinear expressions for heat transfer by natural convection and other similar heat

transfer modes, therefore, the various terms in the K matrix may themselves be functions of temperature. Solution of the T matrix therefore, must be by iteration. Node temperatures obtained after each iteration are used to update the temperature dependent terms in the K matrix. The thermal analyzer uses a Cholesky factorization [Hamming (1973)] of the K matrix to perform this iteration. This iterative solution continues until the change in nodal temperatures between successive iterations is smaller than a user-specified error criteria. Once the iterative solution is obtained, the thermal analyzer writes the temperatures to an output file, where they can be read and analyzed by the user.

IV. PERFORMANCE ANALYSIS

The thermal analysis of the TALSR requires an adequate model capable of determining both the heat transfer characteristics for the complex flow geometries within the HPX, and the values of temperature along the serpentine pattern of the copper tubing. The thermal conductivity of copper, k, the fin thickness, δ , and the channel length, L, are all easily determined from the given material and geometrical considerations of the HPX. Therefore, to complete the thermal analysis, the convection coefficient, h, is required to determine the total input admittance, and the conductance matrix is needed to map base temperature excesses along the length of copper tubing. These remaining values are determined using numerical analysis techniques.

A. HOT PRIMARY GAS SIDE HEAT TRANSFER COEFFICIENT DETERMINATION

The convection heat transfer coefficient, h, encompasses all the effects that influence the convection mode. It depends on conditions in the boundary layer, which are influenced by surface geometry, the nature of fluid motion and many of the fluid thermodynamic and transport properties. By considering the magnitude of the factors affecting the heat transfer coefficient, h, an appreciation for the complexity in determining its value is obtained. In simple flow situations, solutions for h are readily effected mathematically, however,

for situations of complex flow geometries, such as those in the TALSR, the more practical approach involves calculating h from empirical equations. The particular form of these equations is obtained by correlating measured convection heat mass transfer results in terms of appropriate dimensionless groups. The development of the dimensionless group used to determine h was performed by Incropera and Dewitt (1981), and resulted in the derivation of the Nusselt number (Nu). The dimensionless Nusselt number provides a measure of the convective heat transfer occurring at the surface. For a prescribed geometry, the Nusselt number is a universal function of x', the Reynolds number, and the Prandtl number, where x is the dimensionless length of the fluid along the channel. A detailed analysis of these factors will determine the exact correlation to be used in determining the Nusselt number. For the given flow geometry and considerations of the HPX, the Reynolds number is given by Garrett (1992) to be 1900, therefore, flow through the coolant channel remains in the laminar region. In the absence of strict correlations for oscillatory flow convection coefficients, a steady flow Nusselt correlation was assumed to provide a suitable representation of heat transfer in the channel. Sieder and Tate (1936) proposed a suitable correlation for laminar flow in tubes and $([(Re_DPrD/L)^{1/3})(\mu/\mu_s)^{0.14}] \ge 2)$ given by;

Nu = 1.86
$$(RePr/(L/D))^{1/3}(\mu/\mu_s)^{0.14}$$
 (4.1)

where μ and μ_s are the average dynamic viscosity and the surface dynamic viscosity respectively. From knowledge of the Nusselt number, the convection coefficient may now be found using;

$$Nu = (hd_e/k_F)$$
 (4.2)

where d_e is the effective diameter of a non-circular duct through which the fluid passes. Replacing D with d_e in Equation (4.1) and combining with Equation (4.2) results in

$$h = (Nu(k_F)/d_e) = (1.86k_F/d_e) (RePr/(L/de))^{1/3} (\mu/\mu s)^{0.14}$$
 (4.3)

Then using the values of L, Re and Pr specified in Table 1, and realizing that for air $(\mu/\mu_{\rm s})^{0.14}$ ~ 1 over the temperature range of interest for the HPX it is easily shown that;

$$h = (7.9 \times 10^{-3})/d_e^{2/3}$$
 (4.4)

where h is given in Watts/cm 2 -K. The effective diameter, d $_{\rm e}$, is defined as;

$$d_e = (4A_c/P)$$
 (4.5)

where A_{\circ} and P are the flow cross-sectional area and the wetted perimeter respectively. A rectangular duct flow geometry is assumed for the TALSR based on the large radius of curvature of the HPX and the small spacing between fins, thus as shown in Figure 4;

$$d_e = 2zb/(b + z)$$
 (4.6)

where $z = (W - \delta)/2$, and $b = b_1 + b_2$. The value of b varies by location within the HPX, as shown in Figure 5, and results in corresponding changes in the convection coefficient for each location. Therefore the value of h in Equation (4.4) must be considered independently for each location along the copper tubing. This significantly increases the complexity of the analysis.

B. TEMPERATURE EXCESS DETERMINATION

Determination of temperature excess variation with location along the length of copper tubing is also required to adequately complete the analysis of the TALSR. An accurate model of the heat transfer processes shown in Figure 7 is required to determine this variation.

Application of the model builder program THANSS, located within the Steady State Thermal Analyzer software, to the TALSR is accomplished by dividing the length of the copper tubing surface into 144 subvolumes of varying size based on

location. Additionally, another 144 nodes are assigned to corresponding fluid nodes within the pipe to account for variations in fluid temperature as it flows through the tubing. A summary of nodal assignments based on location is given in Appendix C. An additional two nodes are required to complete the model. The first node, a constant heat source node, is assigned to the air flowing through the coolant channels created by the tube and fin design. The temperature of the air is considered uniform and constant at 40°C. The second node is used to represent the liquid input temperature at the inlet to the HPX. This temperature is also assumed uniform and constant at a temperature of 25°C.

The general form of the heat flow equations used for all modes of heat transfer considered within the HPX is;

$$q = K(T_1 - T_2)$$
 (4.7)

where K, the conductance, varies in form depending on the mode of heat transfer considered. For the HPX model, four forms of thermal conductance are required to define the various modes of heat transfer occurring within the HPX.

The first conductance is represented as K_1 and is given by;

$$K_1 = kA_c/\Delta L \qquad (4.8)$$

where k is the thermal conductivity, A_c is the cross sectional area, and ΔL is the length between adjacent nodes. This conductance is used to define heat flow between adjacent nodes on the surface of the copper tubing, therefore, the cross sectional area available for heat transfer, A_c , is given by:

$$A_c = \pi (R^2_{outer} - R^2_{inner}) = 0.134 \text{ cm}^2$$
 (4.9)

The thermal conductivity of copper (k = 401 W/m-K) was used for all calculations involving K_1 .

The second conductance is used in the calculation of the convective heat transfer between nodes on the surface of the copper tubing and corresponding liquid nodes located within the copper tubing. It is denoted as K_2 and is given as:

$$K_2 = h_w A_s \qquad (4.10)$$

where h_w is the convective heat transfer coefficient due to water flow through the tube, and A_s is the surface area over which the heat transfer occurs. The given value of h_F for turbulent water flow through the tube is given by Garrett (1992) as 12600 W/m²-K. The surface area over which the heat transfer occurs is based on the inner radius of the copper tubing and is given by:

$$A_s = 2\pi R_{inner} \Delta L \qquad (4.11)$$

where ΔL is identical in value to that used in determining K_1 .

The third conductance form, K_3 , is used in the determination of the convective heat transfer between adjacent fluid nodes within the tube. It is given as:

$$K_3 = W_F C_F \tag{4.12}$$

where w_F is the fluid weight flow and c_F is its specific heat capacity. This value was calculated for a variety of flow rates ($w_F = 68 \text{ kg/hr}$, 149.7 kg/hr, 272.2 kg/hr, 362.9 kg/hr) through the tubes, and the thermal performance of each flow rate was analyzed. A constant value of 4.182 kJ/kg-K was used for the specific heat capacity of water in all calculations of K_3 .

The fourth conductance term necessary to analyze the thermal model is used in the calculation of the heat transfer from the surface of the tubing, to the surrounding environment via both the prime and fin surfaces. This term is the most difficult of the conductance forms to determine, and requires a return to the principles presented in the single stack cold plate analysis. Equation (2.33) is written in the form of the general heat equation used by the thermal analysis software in its calculations where;

$$K_4 = Y_{in} = Y_{in,p} + Y_{in,f}$$
 (4.13)

and

$$\theta_a = (T_a - T_e) = (T_1 - T_2)$$
 (4.14)

Therefore, the fourth conduction term is the sum of the prime surface and fin input admittances, and the temperature difference is given in terms of a temperature excess at the base of the fin. Applying this conductance form to the HPX requires consideration of the length, AL, between adjacent nodes. The length between adjacent nodes determines both the number of fins, and the amount of prime surface associated with each node. The AL in the analysis model is varied with location along the copper tubing as shown in Appendix C. Once AL is determined, the resulting number of fins, n, and prime surface area may be used with the determined value of h to give;

$$K_4 = hn(W - \delta)L + nY_0 tanh(mb_2)$$
 (4.15)

where $n = \Delta L/W$.

Once the model provides the required data to satisfy the K-value equations, the solution of the thermal conductance matrix is straightforward and ideally suited to a spreadsheet

application. The calculated K-values are then used as input to the thermal analyzer to form a series of node connection data. The spreadsheet calculations and resulting node connection data for each case considered is provided in Appendix D. In the HPX model, the tube water inlet temperature and the oscillating air temperature are assigned constant values. Additionally, as mentioned earlier, 144 nodes were assigned to locations along the copper tubing (nodes 1-144) and 144 corresponding nodes (nodes 145-288) were assigned to the centerline liquid temperature within the tubing.

In the initial development, it was assumed that all fin pairs were shared equally $(\theta_{b1} = \theta_{b2})$. This condition is the easiest to model, because fin sharing node pairs have equivalent values of K_4 assigned to them. This model results in the assigning of 46 distinct K-values and is used in the establishment of the initial temperature excess to be used in subsequent iterations. The computed temperature excess variation with location was then used in the calculation of the nodal fin sharing pair R_0 values using Equation (2.26). Once the R_0 values were known, the values of b_2 and b_1 were calculated using Equation (2.30). The assignment of specific, non uniform fin lengths (b_1 , b_2) along the tubing surface, required the value of K_4 to be modified for each node. This was required based on the fact that now unique values of $Y_{in,f}$ existed for each node. Applying the K-value equations to each

node, for this model, resulted in the generation of 252 unique values of K_4 . These values were then entered into the thermal analysis program. The thermal performance for a variety of flow rates ($w_F = 68 \text{ kg/hr}$, 149.7 kg/hr, 272.2 kg/hr, 362.9 kg/hr) was also analyzed for this new model. These analyses provided adequate data for a performance prediction of the TALSR.

V. EFFECTS OF TEMPERATURE EXCESS RATIO VARIATIONS

The base temperature excess (θ_b) , as defined earlier, is the difference between the temperature at the base of the fin and the temperature of the coolant fluid, given by;

$$\theta_{\rm b} = T_{\rm b} - T_{\rm w} \tag{5.1}$$

It represents the maximum driving potential for convective heat transfer across the fin. Hence, the maximum rate at which a fin could dissipate energy is the rate that would exist if the entire fin surface were at the base temperature. However, because any fin is characterized by a finite conduction resistance, a temperature gradient will exist along the fin and the rate of energy dissipation will be less than the maximum rate. Thus, a convenient measure for the thermal performance of a particular fin is provided by the fin efficiency, η , defined as [Incropera and DeWitt (1981)];

$$\eta = q_f/q_{ideal} \tag{5.2}$$

where

$$q_f = q_b = Y_o \theta_b \tanh(mb_2)$$

$$q_{ideal} = hPb\theta_b$$
 (5.3)

for a rectangular fin of uniform cross sectional area with an

adiabatic tip. The equation for q_{ideal} represents the heat convectively transferred from a fin of height b to the environment if $\theta = \theta_b$ at all points along the fin. Combining Equations (5.2) and Equation (5.3) results in a conventional fin efficiency given as;

$$\eta = \tanh(mb)/mb \tag{5.4}$$

where m is as given in Equation (2.9), and b is the total height of the fin. The application of this parameter to cold plates with asymmetric heat loading, such as those modeled in the HPX, will result in individual efficiencies being identified for each fin subdivision $(b_1 \text{ and } b_2)$. In addition, an overall efficiency for the total fin height b is also calculable.

A simplified cold plate configuration will be used as the model for this analysis in order to provide clarity to the development. The model will consist of a single fin with a total height b, and known heat transfer characteristics for the surrounding flow geometry. Therefore, the only required data to complete the thermal analysis of the model is the prime surface temperature on either end of the fin. Once this value is known, R_0 , b_1 and b_2 are easily determined using Equations (2.26) through (2.28).

A conventional derivation of the efficiencies for each fin subdivision is easily determined by substituting the

values of b_1 and b_2 in for the total fin height, b, in Equation (5.3). A conventional overall efficiency of the entire fin height, b, can also be calculated using

$$\eta_{\text{overall}} = (q_{\text{actualb1}} + q_{\text{actualb2}})/(q_{\text{idealb1}} + q_{\text{idealb2}})$$
which algebraically reduces to

$$\eta_{\text{overall}} = \eta_{\text{b1}}/(1 + (b_2/b_1R_{\theta})) + \eta_{\text{b2}}/(1 + (b_1R_{\theta}/b_2))$$
 (5.6)

The value of R_{θ} used in determining Equation (5.6) is based upon the average temperature change across the fin as given by

$$R_{\theta} = (\Delta T/2 + T_{avg} - T_{e})/(-\Delta T/2 + T_{avg} - T_{e})$$
 (5.7)

where

$$\Delta T = (T_{b1} - T_{b2})$$
 and
$$T_{avg} = (T_{b1} + T_{b2})/2$$
 (5.8)

The use of this definition for R_{θ} , contrary to one based solely on T_{b1} or T_{b2} , provides an accurate representation of the response in fin efficiency due to variations in base temperature excess across the fin.

These variations in fin efficiency were then plotted versus the difference in base temperature excesses as shown in Figure 8.

A more practical definition for fin efficiency would result in the efficiency of each segment increasing with the

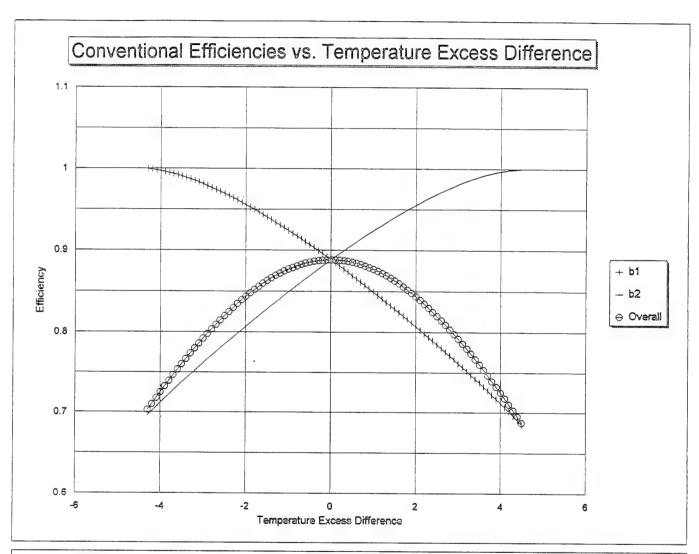


Figure 8: Graphical representation of conventional efficiency variation with changing base temperature excess difference

length of the respective fin heights. For this development the overall efficiency is defined as

$$\eta_{\text{overall}} = \eta_1 + \eta_2 \tag{5.9}$$

where η_1 and η_2 are given by

$$\eta_i = q_{fi}/q_{ideal} = Y_o\theta_{bi} \tanh(mb_i)/q_{ideal}$$
 (5.10)

and i = 1 or 2. The value of q_{ideal} for this development is given as

$$q_{ideal} = hPb\theta_{bi}$$
 (5.11)

where θ_{bi} is chosen as the maximum value of the magnitude of either θ_{b1} or θ_{b2} . For example, for $R_{\theta} \ge 1$ it follows from Equation (5.11) that $q_{ideal} = hPb\theta_{b1}$. After substitution of this result into Equation (5.10) and combining with Equation (5.11), it is found that for $R_{\theta} \ge 1$ overall efficiency is given as

$$\eta_{\text{overall}} = (\tanh(mb_1)/(mb)) + (\tanh(mb_2)/(mbR_6))$$
(5.12)

Similarly for $R_{\theta} \leq 1$

$$\eta_{\text{overall}} = (R_{\theta}(\tanh(mb_1))/(mb)) + (\tanh(mb_2)/(mb))$$
 (5.13)

These equations are seen to be equal for the case where R_θ = 1. A graphical representation of the relationship between the individual fin efficiencies and the practical overall efficiency is presented in Figure 9.

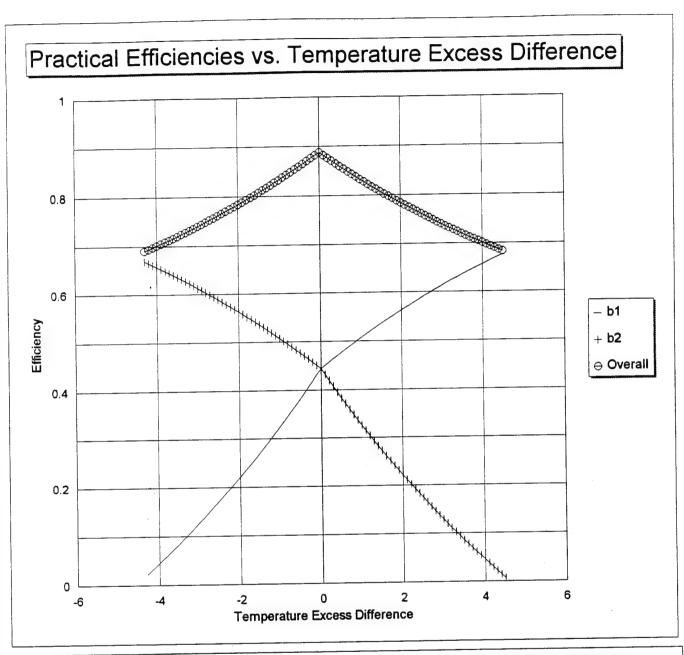


Figure 9 : Relationship of practical efficiencies with variations in base temperature excess difference

VI. RESULTS

An accurate design and performance analysis of the HPX requires critical assessment of the thermal analyzer output data, and representation of that data in a format that is easily understood and interpreted.

A. PROGRAM OUTPUT

The thermal analyzer output data for the simplified model provides baseline temperature excess variations along the surface of the copper tubing and liquid centerline temperatures. The temperature output, for the nodes assigned to the tubing surface (1-144), indicated variations in temperature along the length of the tubing. This is due to variations in available heat transfer area, based on the assignment of node locations and resultant fin allocation. Additionally, the liquid centerline temperature showed a gradually increasing trend from inlet to outlet which is consistent with the expected results.

Analysis of the complex model resulted in similar temperature variations for both the tubing and liquid centerline temperatures, with only slight differences in actual temperature values from those obtained using the simplified model. Complex model analysis for different flow rates indicated that temperature values along the surface of the tube, and throughout the liquid in the tube were largely

dependent on the mass flow rate. For an increasing mass flow rate, this dependence resulted in lower tube surface temperatures, fluid outlet temperature, and overall change in fluid temperature as it passed through the heat exchanger. A summary of the output nodal temperatures for each model considered is found in Appendix E. The results were consistent with expectations and are presented graphically in Figures (10) and (11). In addition, the thermal analysis provided the necessary data to calculate the overall heat transfer for each mass flow rate, using;

$$q = (dm/dt)c_F \Delta T \qquad (6.1)$$

where $c_{\rm F}$ is the specific heat capacity of water (4.182 kJ/kg- K). The heat transfer rate is plotted for each mass flow rate and is presented in Figure (12).

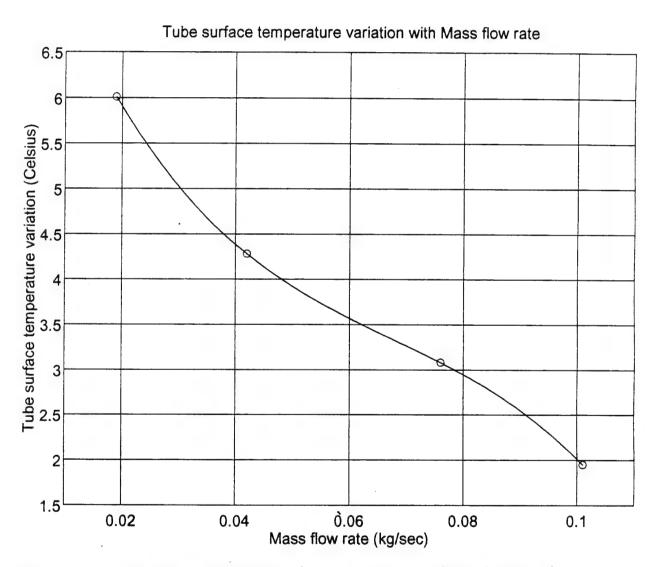


Figure 10: Graphical representation of Tube surface temperature variation with mass flow rate.

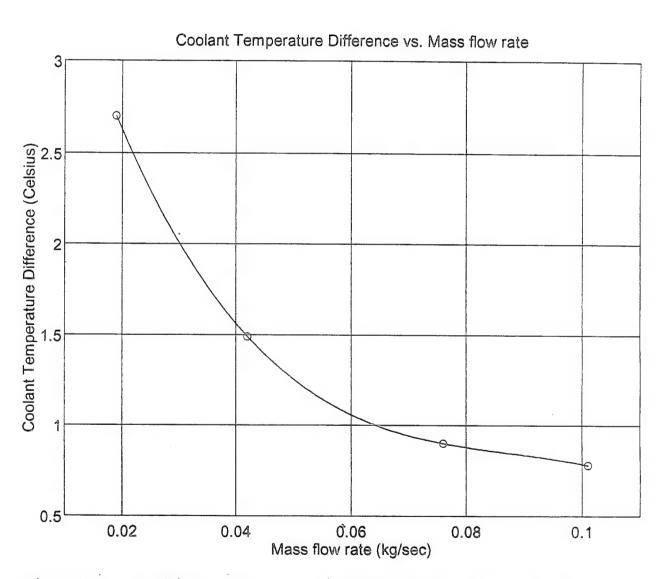


Figure 11: Graphical representation of Coolant Temperature difference (T $_{\rm outlet}$ - T $_{\rm inlet}$) variation with mass flow rate.

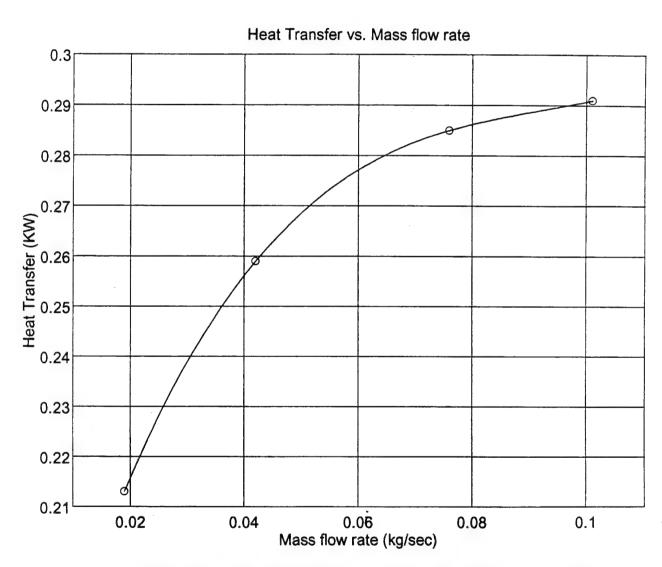


Figure 12: Graphical representation of Heat Transfer with mass flow rate.

VII. SUMMARY AND CONCLUSIONS

The results of this investigation into the thermal performance of the HPX leads to several conclusions. These conclusions are broken down into the following topics: design effectiveness, effectiveness of applying single stack cold plate analysis, effectiveness of computer modeling, and performance analysis validity.

A. DESIGN EFFECTIVENESS

Design effectiveness consideration was based solely on the physical configuration of the HPX. The use of copper tubing bent into a serpentine pattern and then soldered or furnace brazed on a screen of copper fins results in a small and inefficient contact surface between the tubing and the fins. A better design and the one actually used to model the HPX would inlay the copper tubing into the screen of copper fins. This would result in a much higher effective surface area for heat transfer than the current configuration. The success of applying a serpentine tubing pattern for this application as opposed to the more conventional parallel pattern was not analyzed and provides a basis for future thesis work.

B. EFFECTIVENESS OF SINGLE STACK COLD PLATE ANALYSIS

An analysis based on the work of Pieper and Kraus (1995) indicated distinct fin sharing characteristics along the length of copper tubing based on the temperature excess ratio across each shared fin. This resulted in small variations in computed temperatures along the length of the tubing compared to a model subjected to equal operating temperatures on the right and left base surfaces. The magnitude of this variation is dependent on the scale of the application and could result in large values for a large scale application similar to the WyoDak facility in Gillette, Wyoming. Thus, a single stack cold plate analysis would be very useful if the analysis required very accurate representations of temperature along the length of copper tubing in a large scale application. The variation in the magnitude of the temperature variation based on the scale of the application provides a basis for further research.

C. EFFECTIVENESS OF COMPUTER MODELING

Computer modeling provided a convenient and reliable method of calculating the multiple equations created as the result of a detailed analysis of the HPX heat exchanger. The use of computer modeling provides flexibility in the analysis of various heat transfer parameters. The model used for the analysis of the HPX consisted of air flowing over fins,

heating water flowing through the copper tubing. Once these initial inputs are set up and the requisite files built within the thermal analysis software, it becomes simply a matter of replacing the initial model values with new values to evaluate a new system. Therefore, various working fluids with widely varying properties and different internal heat exchanger geometries can be analyzed very easily. This permits the convenient application of specific conditions for a given application, thus saving money and laborious hours in the lab building and evaluating various configurations for a given application. However, once a given application is chosen through the use of computer modeling, extensive testing and empirical data collection is required to validate the computer generated results. For the HPX model analyzed in this thesis, the collection of empirical results through testing and subsequent comparison with the computer generated results is still required.

D. VALIDITY OF PERFORMANCE ANALYSIS

The performance analysis of the HPX required the determination of the convection coefficient, h, and the conductance matrix. These values were determined using numerical analysis techniques.

In the absence of strict correlations for oscillatory flow convection coefficients, a steady flow Nusselt correlation was assumed to provide a suitable representation

of heat transfer in the channel. This is a major assumption, but not without merit based on the argument provided in the thermal performance section. However, a more representative analysis could be made through the application of a Nusselt correlation based solely on acoustically oscillated flow analysis. The derivation of these correlations is currently being pursued through a variety of research, including work conducted at Naval Postgraduate School.

The conductance matrix was used to determine the temperature distribution along the length of the copper tubing. This distribution of temperatures was reasonable and behaved predictably with changes in the mass flow rate of water through the tubing. These temperatures were then used to calculate values for the temperature excess ratio, and subsequently determine the respective lengths of b₁ and b₂. A new temperature distribution was then found based on this cold plate analysis. This provided an adequate representation of the temperature variation along the length of the tubing, however a more accurate distribution could be acquired by repetition of the analysis for each new set of temperature distribution data acquired. This could continue until a user-specified variation limit between successive attempts was met, thus satisfying a predetermined level of accuracy.

APPENDIX A. MURRAY-GARDNER ASSUMPTIONS

The Murray-Gardner assumptions are:

- 1. The heat flow in the fin and its temperatures remain constant with time.
- 2. The fin material is homogenous, its thermal conductivity is the same in all directions, and it remains constant.
- 3. The heat transfer coefficient to the fin is constant and uniform over the entire surface of the fin.
- 4. The temperature of the medium surrounding the fin is uniform.
- 5. The fin thickness is so small compared with its height that temperature gradients across the fin thickness may be neglected.
- 6. The temperature at the base of the fin is uniform.
- 7. There is no contact resistance where the base of the fin joins the prime surface.
- 8. There are no heat sources within the fin itself.
- 9. The heat transferred through the outermost edge of the fin is negligible compared with that leaving the fin through its lateral surface.
- 10. Heat transfer to or from the fin is proportional to the temperature excess between the fin and the surrounding medium.

APPENDIX B. TRANSFORMATION MATRIX DEVELOPMENT

A general application of linear, homogenous, second-order differential equation theory dictates that Equation (2.7) posses two independent solutions. These solutions, and the subsequent development of a linear transformation matrix to map conditions at the fin tip to conditions at the fin base were performed by Kraus et al. (1978). The solutions, designated $\lambda_1(\mathbf{x})$ and $\lambda_2(\mathbf{x})$, must satisfy the initial conditions at the base of the fin where $\mathbf{x} = \mathbf{b}$.

$$\lambda_1(b) = 1; \lambda_1'(b) = 0,$$

$$\lambda_2(b) = 0; \lambda_2'(b) = (1/kA_c(b))$$
(B.1)

where the prime indicates a first derivative. The heat flow, q(x), is always taken as positive from base to tip. Therefore, for longitudinal fins, q(x) is given by;

$$q(x) = kA_c(x) (d\theta(x)/dx)$$
 (B.2)

Thus, the solutions λ_1 and λ_2 can be used to assemble the expressions for the temperature excess $\theta(x)$ and heat flow q(x), at any point in the fin in terms of θ_b and q_b at the fin base;

$$\theta(x) = \theta_b \lambda_1(x) + q_b \lambda_2(x) \qquad (B.3)$$

$$q(x) = kA_c(x) [\theta_b \lambda_1'(x) + q_b \lambda_2'(x)]$$
 (B.4)

In matrix form, Equations (B.3) and (B.4) become;

$$\begin{bmatrix} \theta(x) \\ q(x) \end{bmatrix} = \begin{bmatrix} 1 & 0 \\ 0 & kA_c(x) \end{bmatrix} \begin{bmatrix} \lambda_1(x) & \lambda_2(x) \\ \lambda_1(x) & \lambda_2(x) \end{bmatrix} \begin{bmatrix} \theta_b \\ q_b \end{bmatrix}$$
 (B.5)

The thermal transmission matrix is the linear transformation generated when x is set equal to a, where a equals either the fin height or zero depending on the origin of the height coordinate;

$$\begin{bmatrix} \theta_{a} \\ q_{a} \end{bmatrix} = \Gamma \begin{bmatrix} \theta_{b} \\ q_{b} \end{bmatrix} = \begin{bmatrix} \gamma_{11} & \gamma_{12} \\ \gamma_{21} & \gamma_{22} \end{bmatrix} \begin{bmatrix} \theta_{b} \\ q_{b} \end{bmatrix}$$
 (B.6)

where

$$\gamma_{11} = \lambda_1(a)$$

$$\gamma_{12} = \lambda_2(a)$$

$$\gamma_{21} = kA_0(a)\lambda_1'(a)$$

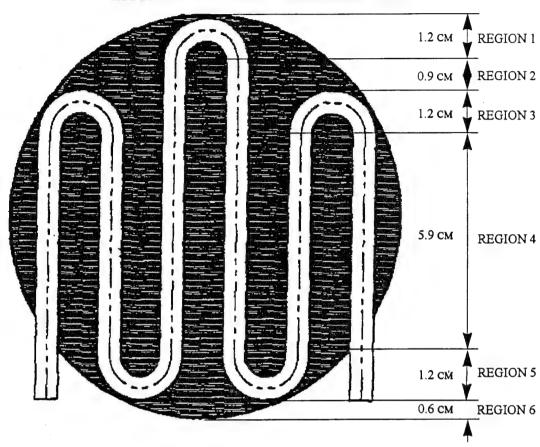
$$\gamma_{22} = kA_0(a)\lambda_2'(a)$$
(B.7)

The elements of the thermal transmission matrix are called the thermal transmission parameters. To represent conditions at the fin base in terms of conditions at the fin tip, it is seen that;

$$\begin{bmatrix} \theta_b \\ q_b \end{bmatrix} = \Gamma^{-1} \begin{bmatrix} \theta_a \\ q_a \end{bmatrix} = \beta \begin{bmatrix} \theta_a \\ q_a \end{bmatrix} = \begin{bmatrix} \tau_{11} & \tau_{12} \\ \tau_{21} & \tau_{22} \end{bmatrix} \begin{bmatrix} \theta_a \\ q_a \end{bmatrix}$$
 (B.8)

where the matrix β is the inverse of the thermal transmission matrix and is called the inverse thermal transmission matrix. Its elements are designated as the inverse thermal transmission parameters.

APPENDIX C. NODAL MODELING DATA



REGION	LENGTH (CM)	# OF FINS	# OF NODES	FINS/NODE
1	1.2	22.6	3	7.53
2	0.9	16.2	2	8.1
3	1.2	22.6	3	7.53
4	5.9	110.7	16	6.92
5	1.2	22.6	3	7.53
6	0.6	11.3	0	N/A

Tube Surface Nodes	Liquid Nodes
21 - 23	165 - 167
5 - 20	149 - 164
1 - 4	145 - 148
24 - 26	168 - 170
27 - 42	171 - 186
43 - 45	187 - 189

Tube Surface Nodes	Liquid Nodes
70 - 72	214 - 216
68 - 69	212 - 213
65 - 67	209 - 211
49 - 64	193 - 208
46 - 48	190 - 192
73 - 75	217 - 219
76 - 77	220 - 221
78 - 80	222 - 220
81 - 96	223 - 238
97 - 99	239 - 242

Tube Surface Nodes	Liquid Nodes
119 -121	263 - 265
103 - 118	247 - 262
100 - 102	244 - 246
122 - 124	266 - 268
125 - 140	269 - 284
141 - 144	284 - 288

APPENDIX D. SPREADSHEET K-VALUE DETERMINATION AND NODE CONNECTION DATA

The general procedure for each case is as follows:

- 1. Use node location and applicable equations to determine fin length associated with that particular node.
- 2. Determine K-Values using spreadsheet application.
- 3. Input K-Values into user friendly spreadsheet that associates each K-Value with a particular node and branch.
- 4. Once K-Values are input into thermal analysis software, an easily read summary of the individual branches and their associated conductances is produced.

TASS GENERAL INPUT MENU - SI Units

(1) Case Title: TALSR(METRIC)---- RUN 1. SIMPLE MODEL CASE

(2)	Nodes	288
(3)	Constant Temperatures	2
(4)	Unique Exponents	0
(5)	Temperature Dependent Conductances	0
(6)	Temperature Dependent Heat Inputs	0
(7)	Computational Accuracy	.0100
(8)	Starting Temperature	25.0
Are	these inputs correct (Y/N) ? Y	

CONDUCTIVITY	EFFECTIVE FIN LENGTH (L) IN CENTIMETERS
K1	N/A
K2	N/A
K3	N/A
K4	N/A
K5	N/A
K6	0.5715
K7	0.094
K8	0.269
К9	0.414
K10	0.531
K11	0.62
K12	0.681
K13	0.716
K14	0.732
K15	N/A
K16	N/A
K17	N/A
K18	0.552
K19	0.404
K20	0.148
K21	1.0185
K22	0.748
K23	0.592
K23	0.888
K25	0.55
K25	1.4655
K27	0.925
K28	0.6125
K29	N/A
K30	N/A
K31	N/A
	0.5715
K32	N/A
K33	N/A
K34	N/A
K35	N/A
K36	N/A
K37	N/A
K38_	0.5715
K39	2.907
K40	. 2.907 N/A
K41	2.482
K42	1.84
K43	
K44	1.119
K45	0.359
K46	N/A

MUSEN

PULDATA					MARIE CANEL IN THE RESIDENCE OF THE PROPERTY O			
in Length (L)	드	(z) Bı	Thermal Conductivity of Copper (kReynolds Number	Reynolds Number	Prandtl Number	Outer pipe diameter Inner pipe diameter	Inner pipe diameter	Pipe Area
(cm)	(cm)	(cm)	(W/m-K)			(cm)	(cm)	(sq. cm.)
0.318	0.015	0.053	401.00	1900.00	0.707	0.635	0.483	0.134
Item	Channel Width (b)	Channel Width (b) Effective Diameter	Heat Transfer Coefficent (h)	Yin,f	Dist. between Nodes	Fins/node	K - Value	
	(cm)	(cm)	(W/sqcm-K)	_	(cm)		(W/K)	
₹ 2			N/A	ø	0.302	A/N	1.778	
\$			1.260		0.302	N/A	0.576	
Ę,			N/A		0.334	N/A	1.604	
7			A/A		0.367	N/A	1.461	
¥			1.260		0.367	N/A	0.701	
%	1.143	0.10192	0.03626	0.01169	0.367	6.880	0.084	
7	0.094	0.06805	0.04746	0.00282	0.367	6.880	0.024	
3	0.269	0.08904	0.03967	0.00658	0.367	6.880	0.049	
K9	0.414	0.09450	0.03813	0.00937	0.367	6.880	0.068	
K10	0.531	0.09694	0.03749	0.01136	0.367	6.880	0.082	
K11	0.620	0.09823	0.03716	0.01271	0.367	6.880	0.091	
K12	0.681	0.09893	0.03698	0.01354	0.367	6.880	0.097	
K13	0.716	0.09929	0.03690	0.01400	0.367	6.880	0.100	
K14	0.732	0.09943	0.03686	0.01419	0.367	6.880	0.101	
K15	•		NA		0.416	NA	1.291	
K16			N/A		0.465	NA	1.152	
K17			1.260		0.465	N/A	0.889	
K18	1.104	0.10176	0.03629	0.01138	0.465	7.540	0.090	
K19	0.808	0.10008	0.03670	0.00885	0.465	7.540	0.071	
K20	0.296	0.09038	0.03928	0.00366	0.465	7.540	0.032	
ξ <u>3</u>	2.037	0.10396	0.03578	0.01683	0.465	7.540	0.131	
K22	1.496	0.10301	0.03600	0.01413	0.465	7.540	0.111	
K23	1.184	0.10208	0.03622	0.01200	0.465	7.540	0.094	
K24	0.888	0.10064	0.03657	0.01591	0.465	7.540	0.124	
K25	0.550	0.09725	0.03741	0.01167	0.465	7.540	0.092	
K26	2.931	0.10477	0.03560	0.01924	0.465	7.540	0.149	
K27	1.850	0.10369	0.03584	0.01602	0.465	7.540	0.125	
K28	1.225	0.10223	0.03618	0.01230	0.465	7.540	0.097	
K29			N/A		0.496	N/A	1.082	
K30			A/A		0.541	N/A	0.992	
K31			1.260		0.518	N/A	0.990	
K32	1.143	0.10192	0.03626	0.01169	0.541	7.540	0.092	
K33			N/A		0.312	NA	1.717	
K34			1.260		0.427	NA	0.815	

2.100	0.542	1.251	0.655	0.098	0.172	1.200	0.171	0.157	0.138	0.067	173 886
ΝΆ	N/A	NA	N/A	8.040	8.040	N/A	8.040	7.540	7.540	7.540	
0.255	0.284	0.429	0.343	0.429	0.429	0.447	0.429	0.465	0.465	0.465	
				0.01169	0.02086		0.02077	0.02025	0.01775	0.00834	,
				9	0		1	s,		2	
A/N	1,260	A/Z	1.260	0.03626	0.0356	NA AM	0.0356	0.0358	0.0362	0.0385	
				0.10192	0.10476		0.10444	0.10368	0.10182	0.09288	00400:0
				1.143	2 907		2 482	1 840	1 1 19	0.350	20.0
K35	K36	K37	K38	2 S	K40	K41	K42	K43	K44	745	2

BRANCH	NODE	TON	TAG	I, C, S I	BRANCH	NODE	TON	TAG	I, C, S,
1	1	2	1	K1	51	16	17	1	S9
2		145	4	K2	52		160	4	S10
3	2	3	1	S1	53		301	1	S11
4		146	4	S2	54		301	1	S38
5	3	4	1	S1	55	17	18	1	S9
6		147	4	S2	56		161	4	S10
7	4	5	1	КЗ	57		301	1	S11
8		148	4	S2	58		301	1	S34
9	5	6	1	K4	59	18	19	1	S9
10		149	4	K5	60		162	4	S10
11		301	1	K6	61		301	1	S11
12	6	7	1	S9	62		301	1	S30
13		150	4	S10	63	19	20	1	S9
14	\	301	1	S11	64		163	4	S10
15	7	8	1	S9	65		301	1	S11
16		151	4	S10	66		301	1	S26
17	 	301	1	S11	67	20	21	1	K15
18	1	301	1	K7	68		164	4	S10
19	8	9	1	\$9	69		301	1	S11
20		152	4	S10	70		301	1	S22
21		301	1	S11	71	21	22	1	K16
22	 	301	1	K8	72		165	4.	K17
23	9	10	1	S9	73		301	1	K18
24		153	4	S10	74	22	23	1	S71
25		301	1	S11	75		166	4	S72
26	 	301	1	К9	76		301	1	K19
27	10	11	1	S9	77	23	24	1	S71
28		154	4	S10	78		167	4	S72
29		301	1	S11	79		301	1	K20
30		301	1	K10	80	24	25	1	S71
31	11	12	1	S9	81		168	4	S72
32	<u> </u>	155	4	S10	82		301	1	K21
33		301	1	S11	83		301	1	S79
34		301	1	K11	84	25	26	1	S71
35	12	13	1	S9	85		169	4	S72
36		156	4	S10	86		301	1	K22
37	1	301	1	S11	87		301	1	S76
38		301	1	K12	88	26	27	1	S67
39	13	14	1	S9	89		170	4	S72
40		157	4	S10	90		301	1	K23
41		301	1	S11	91		301	1	S73
42		301	1	K13	92	27	28	1	S9
43	14	15	1	S9	93		171	4	S10
44		158	4	S10	94		301	11	S11
45		301	1	S11	95		301	1	S11
46		301	1	K14	96	28	29	1	S9
47	15	16	1	S9	97		172	4	\$10
48		159	4	S10	98		301	1	S11
49		301	1	S11	99		301	1	S11
50		301	1	S42_	100	29	30	1 1	S9

BRANCH	NODE	TON	TAG	I. C. S	BRANCH	NODE	TON	TAG	1, C, S,
101		173	4.	S10	151		301	1	S11
102		301	1	S11	152	42	43	1	S67
103		301	1	S11	153		186	4	S10
104	30	31	1	S9	154		301	1	S11
105		174	4	S10	155		301	1	S11
106		301	1	S11	156	43	44	1	S71
107		301	1	S11	157		187	4	S72
108	31	32	1	S9	158		301	1	S73
109		175	4	S10	159		301	1	K24
110		301	1	S11	160	44	45	1	S71
111		301	1	S11	161		188	4	S72
112	32	33	1	S9	162		301	1	S76
113		176	4	S10	163		301	1	K25
114		301	1	S11	164	45	46	1	S71
115		301	1	S11	165	,,,	189	4	S72
116	33	34	1	S9	166		301	1	S79
117	- 55	177	4	S10	167	46	47	1	S71
118		301	1	S11	168		190	4	S72
119		301	1	S11	169		301	1	K26
120	34	35	1	S9	170		301	1	S79
121	34	178	4	S10	171	47	48	1,	S71
122		301	1	S11	172	-71	191	4	S72
123		301	1	S11	173		301	1 .	K27
	35	36	1	S9	174		301	1	S76
124	35_	179	4	S10	175	48	49	1	S67
125		301	1	S11	176	70	192	4	S72
126 127		301	1	S11	177		301	1	K28
	26	37	1	S9	178		301	1	S73
128 129	36	180	4	S10	179	49	50	1	S9
		301	1	S11	180	+5	193	4	S10
130		301	1	S11	181		301	1	S11
132	37	38	1	S9	182		301	 i 	S11
133	31	181	4	S10	183	50	51	1	S9
		301	1	S11	184	30	194	4	S10
134		301	1	S11	185		301	1	S11
136	38	39	1	S9	186		301	1	S11
137	30	182	4	S10	187	51	52	1	S9
	-	301	1	S11	188	 	195	4	S10
138	-	301	1	S11	189		301	1	S11
140	39	40	1	S9	190		301	1	S11
141	33	183	4	S10	191	52	53	1	S9
142		301	4	S11	192		196	4	S10
143		301	1	S11	193		301	1	S11
144	40	41	1	S9	194		301	1	S11
145	70	184	4	S10	195	53	54	1 1	\$9
145		301	1	S11	196		197	4	S10
147		301	1	S11	197		301	1	S11
148	41	42	1	S9	198		301	1 1	S11
149	41	185	4	S10	199	54	55	1	S9
150	1	301	1	S11	200	 	198	1 4	S10
100	1	301	1 1	311	200			· · ·	

BRANCH	NODE	TON	TAG	1, C, S	BRANCH	NODE	TON	TAG	1, C, S
201		301	1	S11	251	67	68	1	K35
202		301	1	S11	252		211	4	K36
203	55	56	1	S9	253		301	1	S245
204		199	4	S10	254		301	1	S82
205		301	1	S11	255	68	69	1	K37
206		301	1	S11	256		212	4	K38
207	56	57	1	S9	257		301	1	K39
208		200	4	S10	258		301	1	K40
209		301	1	S11	259	69	70	1	K41
210		301	1	S11	260	03	213	4	S256
211	57	58	1	S9	261		301	1	
212	31								S257
		201	4	S10	262	70	301	1	K42
213	,	301	1	S11	263	70	71	1	S71
214		301	1	S11	264		214	4	S72
215	58	59	1	S9	265		301	1	S73
216		202	4	S10	266		301	1	K43
217		301	1	S11	267	71	72	1	S71
218		301	1	S11	268		215	4	S72
219	59	60	1	S9	269		301	1	S76
220		203	4	S10	270		301	1	K44
221		301	1	S11	271	72	73	1	S71
222		301	1	S11	272		216	4	S72
223	60	61	1	S9	273		301	1 .	S79
224		204	4	S10	274		301	1	K45
225		301	1	S11	275	73	74	1	S71
226		301	1	S11	276		217	4	S72
227	61	62	1	S9	277		301	1	S274
228		205	4	S10	278		301	1	S79
229		301	1	S11	279	74	75	1	S71
230		301	1	S11	280		218	4	S72
231	62	63	1	S9	281		301	1	\$270
232		206	4	S10	282		301	1	S76
233		301	1	S11	283	75	76	1	S259
234		301	1	S11	284		219	4	S72
235	63	64	1	S9	285		301	1	S266
236		207	4	S10	286		301	1	S73
237		301	1	S11	287	76	77	1	S255
238		301	1	S11	288		220	4	S256
239	64	65	1	K29	289		301	1	S262
240	04	208	4	S10	290		301	1	S257
		301		S10	291	77	78	1	S251
241		1	1 1			- (1		4	S256
242	65	301	1 1	S11	292		221	1	S258
243	65	66	1	K30	293		301		S256
244		209	4	K31	294	70	301	1 1	
245	·	301	1 1	K32	295	78	79	1	S247
246		301	1	S90	296		222	4	S252
247	66	67	1	K33	297	ļ	301	1	S82
248		210	4	K34	298	70	301	1 1	S245
249		301	1 1	S245	299	79	80	1 1	S243
250		301	1 1	S86	300		223	4	S248

BRANCH	NODE	TON	TAG	I, C, S	BRANCH	NODE	TON	TAG	I. C. S
301		301	1	S86	352		236	4	S10
302		301	1	S245	353		301	1	S11
303	80	81	1	S239	354		301	1	S11
304		224	4	S244	355	93	94	1	S 9
305		301	1	S90	356		237	4	S10
306		301	1	S245	357		301	1	S11
307	81	82	1	S9	358		301	1	S11
308		225	4	S10	359	94	95	1	\$9
309		301	1	S11	360		238	4	S10
310		301	1	S11	361		301	1	S11
311	82	83	1	S9	362		301	1	S11
312	02	226	4	S10	363	95	96	1	S9
313		301	1	S11	364		239	4	S10
314		301	1	S11	365		301	1	S11
315	83	84	1	\$9	366		301	1	S11
	03	227	4	S10	367	96	97	1	S67
316		301	1	S11	368	30	240	4	S10
317			1	S11	369		301	1	S11
318	0.4	301	1	S9	370		301	1	S11
319	84	85			371	97	98	1	S71
. 320		228	4	S10 S11	372	31	241	4	S72
321		301	1		373		301	1 "	S73
322	0.5	301	1	S11			301	1	S177
323	85	86	1	S9	374	98	99	1	S71
324		229	4	S10	376	30	242	40	S72
325		301	1	S11	377		301	1	S76
326		301	1	S11					S173
327	86	87	1	S9	378	00	301 100	1	S71
328		230	4	S10	379 380	99	243	4	S72
329		301	1	S11				1	S79
330		301	1	S11	381		301	1	S169
331	87	88	1	S9	382	100		1	S71
332		231	4	S10	383	100	101		
333	ļ	301	1	S11	384		244	1	S72 S79
334		301	1	S11	385	404	301	1	S71
335	88	89	1	S9	386	101		4	S72
336		232	4	S10	387		245		S163
337		301	1	S11	388		301	1 1	S76
338		301	1	S11		102	103	1	S67
339	89	90	1	S9	390	102			S72
340		233	4	S10	391		246	1	S159
341	ļ	301	1	S11	392		301	1	\$73
342	0.0	301	1	S11	393	103	301	-	
343	90	91	1 1	S9	394	103	247	4	S9 S10
344	-	234	4	S10	395			1	S11
345	ļ	301	1	S11	396		301		
346		301	1	S11	397	104	301	1 1	S11 S9
347	91	92	1	S9	398	104	105	1 1	
348		235	4	S10	399	-	248	4	S10
349	1	301	1	S11	400		301	1 1	S11 S11
350		301	1	S11_	401	105	301	1 1	S9
351	92	93	1	S9	402	105	106	1	39

BRANCH	NODE	TON	TAG	I, C, S	BRANCH	NODE	TON	TAG	I. C. S
403		249	4	S10	453		301	1	S11
404		301	1	S11	454	118	119	1	S67
405		301	1	S11	455		262	4	S10
406	106	107	1	S9	456		301	1	S11
407		250	4	S10	457		301	1	S11
408		301	1	S11	458	119	120	1	S71
409		301	1	S11	459		263	4	S72
410	107	108	1	S9	460		301	1	S73
411		251	4	S10	461		301	1	S90
412		301	1	S11	462	120	121	1	S71
413		301	1	S11	463	120	264	4	S72
414	108	109	1	S9	464		301	1	S76
415	100	252	4	S10	465		301	1	S86
416	`	301	1	S11	466	121	122	1	S71
417	\	301	1	S11	467		265	4	S72
418	109	110	1	S9	468		301	1	S79
419	100	253	4	S10	469		301	1	S82
420		301	1	S11	470	122	123	1	S71
421		301	1	S11	471	122	266	4	S72
422	110	111	1	S9	472		301	1	S79
423	110	254	4	S10	473	123	124	1	S71
424		301	1	S11	474	120	267	4	S72
425		301	1	S11	475		301	1	S76
	114			S9	476	124	125		S67
426	111	112	4			124	268	1	S72
427	-	255		S10	477			1	S73
428		301	1	S11	478	125	301	1	S9
429	440	301	1	S11	479	125	126		
430	112	113	1	S9	480	<u> </u>	269	1	S10 S22
431		256	4	S10	481		301	1	
432	ļ	301	1	S11	482	126	301		S11 S9
433	442	301	1	S9	483 484	120	270	1 4	S10
434	113	114	1		485			1	S26
435		257	4	S10 S11		<u> </u>	301	1	S11
436		301	1		486 487	127	301	1	S9
437	114	301	1	S11	488	121	271	4	S10
438 439	114	115	1 4	S9 S10	489	-	301	1	S30
440		258 301	1	S11	490	-	301	1	S11
441	 		1	S11	490	128	129	1	S9
	145	301		S9	492	120	272	4	S10
442	115	116 259	4	S10	493	1	301	1	S34
444	-				494		301	1	S11
444		301	1	S11 S11	494	129	130	1	S9
446	116	301 117	1 1	S9	495	123	273	4	S10
446	116		4	S10	497		301	1 1	S38
447		260	1	S10	498	-	301	1	S11
	 	301			499	130	131	1 1	S9
449 450	117	301	1 1	S11	500	130	274	+ 4	S10
450	117	118	1 1	S9	500	+	301	: 1	S42
451	-	261	4	S10	501	-	301	1	S11
452		301	1	S11	502		301	1	311

BRANCH	NODE	TON	TAG	1, C, S	BRANCH	NODE	TON	TAG	I, C, S
503	131	132	1	S9	553				
504		275	4	S10	554				
505		301	1	S46	555				
506		301	1	S11	556				
507	132	133	1	S9	557				
508		276	4	S10	558				
509		301	1	S42	559				
510		301	1	S11	560				
511	133	134	1	S9	561				
512		277	4	S10	562				
513		301	1	\$38	563				
514		301	1	S11	564				
515	134	135	1	S9	565				
516	1	278	4	S10	566				
517		301	1	S34	567				
518		301	1	S11	568				
519	135	136	1	S9	569				
520		279	4	S10	570				
521		301	1	S30	571				
522		301	1	S11	572				
523	136	137	1	S9	573				
524	•	280	4	S10	574			•	
525		301	1	S26	575				
526		301	1	S11	576				
527	137	138	1	S9	577				
528	107	281	4	S10	578				
529		301	1	\$22	579				
530		301	1	S11	580				
531	138	139	1	S9	581				
532	100	282	4	S10	582				
533		301	1	S18	583				
534		301	1	S11	584				
535	139	140	1	S9	585				
536	100	283	4	S10	586				
537		301	1	S11	587				
538	140	141	1	S7	588			1	
539	1,10	284	4	S10	589				
540		301	1 1	S11	590				
541	141	142	1	S1	591				
542	· · · ·	285	4	S2	592		1		
543	142	143	1	S1	593			1	
544		286	4	S2	594			T	
545	143	144	1	S1	595		T		
546		287	4	S2	596			1	
547	144	288	4	S2	597				
548			<u> </u>	1 7	598				
549			1		599				
		+	+	1	600				
1 250	1			1	000	1			
550 551			-		601				

BRANCH	NODE	TON	TAG	I, C, S	BRANCH	NODE	TON	TAG	I, C, S,
701	145	302	5	K46	751	195	194	5	S701
702	146	145	5	S701	752	196	195	5	S701
703	147	146	5	S701	753	197	196	5	S701
704	148	147	5	S701	754	198	197	5	S701
705	149	148	5	S701	755	199	198	5	S701
706	150	149	5	S701	756	200	199	5	S701
707	151	150	5	S701	757	201	200	5	S701
708	152	151	5	S701	758	202	201	5	S701
709	153	152	5	S701	759	203	202	5	S701
710	154	153	5	S701	760	204	203	5	S701
711	155	154	5	S701	761	205	204	5	S701
712	156	155	5	S701	762	206	205	5	S701
713	157	156	5	S701	763	207	206	5	S701
714	158	157	5	S701	764	208	207	5	S701
715	159	158	5	S701	765	209	208	5	S701
716	160	159	5	S701	766	210	209	5	S701
717	161	160	5	S701	767	211	210	5	S701
718	162	161	5	S701	768	212	211	5	S701
719	163	162	5	S701	769	213	212	5	S701
720	164	163	5	S701	770	214	213	5	S701
721	165	164	5	S701	771	215	214	5	S701
722	166	165	5	S701	772	216	215	5	S701
723	167	166	5	S701	773	217	216	5	S701
724	168	167	5	S701	774	218	217	5	S701
725	169	168	5	S701	775	219	218	7 5	S701
726	170	169	5	S701	776	220	219	5	S701
727	171	170	5	S701	777	221	220	5	S701
728	172	171	5	S701	778	222	221	5	S701
729	173	172	5	S701	779	223	222	5	S701
730	174	173	5	S701	780	224	223	5	S701
731	175	174	5	S701	781	225	224	5	S701
732	176	175	5	S701	782	226	225	5	S701
733	177	176	5	S701	783	227	226	5	S701
734	178	177	5	S701	784	228	227	5	S701
735	179	178	5	S701	785	229	228	5	S701
736	180	179	5	S701	786	230	229	5	S701
737	181	180	5	S701	787	231	230	5	S701
738	182	181	5	S701	788	232	231	5	S701
739	183	182	5	S701	789	233	232	5	S701
740	184	183	5	S701	790	234	233	5	S701
741	185	184	5	S701	791	235	234	5	S701
742	186	185	5	S701	792	236	235	5	S701
743	187	186	5	S701	793	237	236	5	S701
744	188	187	5	S701	794	238	237	5	S701
745	189	188	5	S701	795	239	238	5	S701
746	190	189	5	S701	796	240	239	5	S701
747	191	190	5	S701	797	241	240	5	S701
748	192	191	5	S701	798	242	241	5	S701
749	193	192	5	S701	799	243	242	5	S701
750	194	193	5	S701	800	244	243	5	S701

801 245 244 5 S701 851 802 246 245 5 S701 852 803 247 246 5 S701 853 804 248 247 5 S701 854 805 249 248 5 S701 855 806 250 249 5 S701 856 807 251 250 5 S701 856 807 251 250 5 S701 857 808 252 251 5 S701 858 809 253 252 5 S701 860 811 255 254 5 S701 860 811 255 254 5 S701 861 812 256 255 5 S701 862 813 257 256 5 S701 863 814 <th></th> <th></th> <th></th> <th></th>				
803 247 246 5 S701 853 804 248 247 5 S701 854 805 249 248 5 S701 855 806 250 249 5 S701 856 807 251 250 5 S701 857 808 252 251 5 S701 858 809 253 252 5 S701 869 810 254 253 5 S701 860 811 255 254 5 S701 861 812 256 255 5 S701 862 813 257 256 5 S701 863 814 258 257 5 S701 864 815 259 258 5 S701 866 817 261 260 5 S701 866 817 <td></td> <td></td> <td>1</td> <td>1</td>			1	1
803 247 246 5 S701 853 804 248 247 5 S701 854 805 249 248 5 S701 855 806 250 249 5 S701 856 807 251 250 5 S701 857 808 252 251 5 S701 858 809 253 252 5 S701 860 810 254 253 5 S701 860 811 255 254 5 S701 861 812 256 255 5 S701 862 813 257 256 5 S701 863 814 258 257 5 S701 866 815 259 258 5 S701 866 817 261 260 5 S701 866 817 <td></td> <td></td> <td></td> <td></td>				
805 249 248 5 S701 855 806 250 249 5 S701 856 807 251 250 5 S701 857 808 252 251 5 S701 858 809 253 252 5 S701 869 810 254 253 5 S701 860 811 255 254 5 S701 861 812 256 255 5 S701 862 813 257 256 5 S701 863 814 258 257 5 S701 863 814 258 257 5 S701 865 816 260 259 5 S701 866 817 261 260 5 S701 867 818 262 261 5 S701 868 819 <td></td> <td></td> <td></td> <td></td>				
805 249 248 5 \$701 855 806 250 249 5 \$701 856 807 251 250 5 \$701 857 808 252 251 5 \$701 858 809 253 252 5 \$701 869 810 254 253 5 \$701 869 810 254 253 5 \$701 860 811 255 254 5 \$701 861 812 256 255 5 \$701 861 812 256 255 5 \$701 862 813 257 256 5 \$701 863 814 258 257 5 \$701 863 815 259 258 5 \$701 866 817 261 260 5 \$701 866 817 <td></td> <td></td> <td></td> <td></td>				
806 250 249 5 S701 856 807 251 250 5 S701 857 808 252 251 5 S701 858 809 253 252 5 S701 869 810 254 253 5 S701 860 811 255 254 5 S701 861 812 256 255 5 S701 862 813 257 256 5 S701 863 814 258 257 5 S701 863 815 259 258 5 S701 865 816 260 259 5 S701 866 817 261 260 5 S701 868 819 263 262 5 S701 868 819 263 262 5 S701 869 820 <td></td> <td></td> <td></td> <td></td>				
807 251 250 5 S701 858 808 252 251 5 S701 858 809 253 252 5 S701 859 810 254 253 5 S701 860 811 255 254 5 S701 861 812 256 255 5 S701 862 813 257 256 5 S701 863 814 258 257 5 S701 863 815 259 258 5 S701 864 815 259 258 5 S701 866 816 260 259 5 S701 866 817 261 260 5 S701 866 818 262 261 5 S701 868 819 263 262 5 S701 870 821 <td></td> <td></td> <td></td> <td></td>				
808 252 251 5 S701 858 809 253 252 5 S701 859 810 254 253 5 S701 860 811 255 254 5 S701 861 812 256 255 5 S701 862 813 257 256 5 S701 863 814 258 257 5 S701 864 815 259 258 5 S701 866 816 260 259 5 S701 866 817 261 260 5 S701 866 817 261 260 5 S701 866 818 262 261 5 S701 868 819 263 262 5 S701 869 820 264 263 5 S701 870 821 <td></td> <td></td> <td></td> <td></td>				
809 253 252 5 S701 859 810 254 253 5 S701 860 811 255 254 5 S701 861 812 256 255 5 S701 862 813 257 256 5 S701 863 814 258 257 5 S701 864 815 259 258 5 S701 865 816 260 259 5 S701 866 817 261 260 5 S701 867 818 262 261 5 S701 868 819 263 262 5 S701 868 819 263 262 5 S701 869 820 264 263 5 S701 870 821 265 264 5 S701 871 822 <td></td> <td></td> <td>-</td> <td></td>			-	
810 254 253 5 S701 860 811 255 254 5 S701 861 812 256 255 5 S701 862 813 257 256 5 S701 863 814 258 257 5 S701 864 815 259 258 5 S701 865 816 260 259 5 S701 866 817 261 260 5 S701 866 817 261 260 5 S701 868 819 263 262 5 S701 868 819 263 262 5 S701 869 820 264 263 5 S701 870 821 265 264 5 S701 871 822 266 265 5 S701 873 824 <td></td> <td></td> <td></td> <td>_</td>				_
811 255 254 5 S701 861 812 256 255 5 S701 862 813 257 256 5 S701 863 814 258 257 5 S701 864 815 259 258 5 S701 865 816 260 259 5 S701 866 817 261 260 5 S701 866 817 261 260 5 S701 867 818 262 261 5 S701 867 818 262 261 5 S701 869 820 264 263 5 S701 870 821 265 264 5 S701 871 822 266 265 5 S701 873 824 268 267 5 S701 874 825 <td></td> <td></td> <td>-</td> <td></td>			-	
812 256 255 5 S701 862 813 257 256 5 S701 863 814 258 257 5 S701 864 815 259 258 5 S701 865 816 260 259 5 S701 866 817 261 260 5 S701 866 817 261 260 5 S701 866 818 262 261 5 S701 867 818 262 261 5 S701 869 820 264 263 5 S701 870 821 265 264 5 S701 871 822 266 265 5 S701 872 823 267 266 5 S701 873 824 268 267 5 S701 875 826 <td></td> <td></td> <td></td> <td></td>				
813 257 256 5 S701 863 814 258 257 5 S701 864 815 259 258 5 S701 865 816 260 259 5 S701 866 817 261 260 5 S701 867 818 262 261 5 S701 868 819 263 262 5 S701 869 820 264 263 5 S701 870 821 265 264 5 S701 871 822 266 265 5 S701 872 823 267 266 5 S701 873 824 268 267 5 S701 874 825 269 268 5 S701 875 826 270 269 5 S701 877 828 <td></td> <td></td> <td></td> <td></td>				
814 258 257 5 S701 864 815 259 258 5 S701 865 816 260 259 5 S701 866 817 261 260 5 S701 867 818 262 261 5 S701 868 819 263 262 5 S701 869 820 264 263 5 S701 870 821 265 264 5 S701 871 822 266 265 5 S701 872 823 267 266 5 S701 873 824 268 267 5 S701 874 825 269 268 5 S701 876 827 271 270 5 S701 878 829 273 272 5 S701 880 831 <td></td> <td></td> <td>-</td> <td></td>			-	
815 259 258 5 S701 865 816 260 259 5 S701 866 817 261 260 5 S701 867 818 262 261 5 S701 868 819 263 262 5 S701 869 820 264 263 5 S701 870 821 265 264 5 S701 871 822 266 265 5 S701 872 823 267 266 5 S701 873 824 268 267 5 S701 874 825 269 268 5 S701 876 827 271 270 5 S701 876 827 271 270 5 S701 878 829 273 272 5 S701 880 831 <td></td> <td></td> <td></td> <td></td>				
816 260 259 5 S701 866 817 261 260 5 S701 867 818 262 261 5 S701 868 819 263 262 5 S701 869 820 264 263 5 S701 870 821 265 264 5 S701 871 822 266 265 5 S701 871 822 266 265 5 S701 872 823 267 266 5 S701 873 824 268 267 5 S701 874 825 269 268 5 S701 875 826 270 269 5 S701 876 827 271 270 5 S701 878 829 273 272 5 S701 880 831 <td>-</td> <td></td> <td></td> <td></td>	-			
817 261 260 5 S701 867 818 262 261 5 S701 868 819 263 262 5 S701 869 820 264 263 5 S701 870 821 265 264 5 S701 871 822 266 265 5 S701 872 823 267 266 5 S701 873 824 268 267 5 S701 874 825 269 268 5 S701 874 825 269 268 5 S701 875 826 270 269 5 S701 876 827 271 270 5 S701 877 828 272 271 5 S701 879 830 274 273 5 S701 881 831 <td></td> <td></td> <td></td> <td></td>				
818 262 261 5 S701 868 819 263 262 5 S701 869 820 264 263 5 S701 870 821 265 264 5 S701 871 822 266 265 5 S701 872 823 267 266 5 S701 873 824 268 267 5 S701 874 825 269 268 5 S701 874 825 269 268 5 S701 875 826 270 269 5 S701 876 827 271 270 5 S701 876 827 271 270 5 S701 878 829 273 272 5 S701 879 830 274 273 5 S701 881 832 <td></td> <td></td> <td></td> <td></td>				
819 263 262 5 S701 869 820 264 263 5 S701 870 821 265 264 5 S701 871 822 266 265 5 S701 872 823 267 266 5 S701 873 824 268 267 5 S701 874 825 269 268 5 S701 875 826 270 269 5 S701 876 827 271 270 5 S701 877 828 272 271 5 S701 878 829 273 272 5 S701 879 830 274 273 5 S701 880 831 275 274 5 S701 881 832 276 275 5 S701 882 833 <td></td> <td></td> <td></td> <td></td>				
820 264 263 5 S701 870 821 265 264 5 S701 871 822 266 265 5 S701 872 823 267 266 5 S701 873 824 268 267 5 S701 874 825 269 268 5 S701 875 826 270 269 5 S701 876 827 271 270 5 S701 877 828 272 271 5 S701 878 829 273 272 5 S701 879 830 274 273 5 S701 880 831 275 274 5 S701 881 832 276 275 5 S701 882 833 277 276 5 S701 883 834 <td></td> <td></td> <td></td> <td></td>				
821 265 264 5 S701 871 822 266 265 5 S701 872 823 267 266 5 S701 873 824 268 267 5 S701 874 825 269 268 5 S701 875 826 270 269 5 S701 876 827 271 270 5 S701 877 828 272 271 5 S701 878 829 273 272 5 S701 879 830 274 273 5 S701 880 831 275 274 5 S701 881 832 276 275 5 S701 882 833 277 276 5 S701 883 834 278 277 5 S701 884 835 <td></td> <td></td> <td></td> <td></td>				
822 266 265 5 S701 872 823 267 266 5 S701 873 824 268 267 5 S701 874 825 269 268 5 S701 875 826 270 269 5 S701 876 827 271 270 5 S701 877 828 272 271 5 S701 878 829 273 272 5 S701 879 830 274 273 5 S701 880 831 275 274 5 S701 881 832 276 275 5 S701 882 833 277 276 5 S701 883 834 278 277 5 S701 884 835 279 278 5 S701 886 837 <td></td> <td></td> <td></td> <td></td>				
823 267 266 5 \$701 873 824 268 267 5 \$701 874 825 269 268 5 \$701 875 826 270 269 5 \$701 876 827 271 270 5 \$701 877 828 272 271 5 \$701 878 829 273 272 5 \$701 879 830 274 273 5 \$701 880 831 275 274 5 \$701 881 832 276 275 5 \$701 882 833 277 276 5 \$701 883 834 278 277 5 \$701 884 835 279 278 5 \$701 885 836 280 279 5 \$701 886 837 <td></td> <td></td> <td></td> <td></td>				
824 268 267 5 S701 874 825 269 268 5 S701 875 826 270 269 5 S701 876 827 271 270 5 S701 877 828 272 271 5 S701 878 829 273 272 5 S701 879 830 274 273 5 S701 880 831 275 274 5 S701 881 832 276 275 5 S701 882 833 277 276 5 S701 883 834 278 277 5 S701 884 835 279 278 5 S701 885 836 280 279 5 S701 886 837 281 280 5 S701 888 839 <td></td> <td></td> <td></td> <td></td>				
825 269 268 5 S701 875 826 270 269 5 S701 876 827 271 270 5 S701 877 828 272 271 5 S701 878 829 273 272 5 S701 879 830 274 273 5 S701 880 831 275 274 5 S701 881 832 276 275 5 S701 882 833 277 276 5 S701 883 834 278 277 5 S701 884 835 279 278 5 S701 885 836 280 279 5 S701 886 837 281 280 5 S701 888 839 283 282 5 S701 889 840 <td></td> <td></td> <td></td> <td></td>				
826 270 269 5 S701 876 827 271 270 5 S701 877 828 272 271 5 S701 878 829 273 272 5 S701 879 830 274 273 5 S701 880 831 275 274 5 S701 881 832 276 275 5 S701 882 833 277 276 5 S701 883 834 278 277 5 S701 884 835 279 278 5 S701 885 836 280 279 5 S701 886 837 281 280 5 S701 887 838 282 281 5 S701 888 839 283 282 5 S701 889 840 <td></td> <td></td> <td></td> <td></td>				
827 271 270 5 S701 877 828 272 271 5 S701 878 829 273 272 5 S701 879 830 274 273 5 S701 880 831 275 274 5 S701 881 832 276 275 5 S701 882 833 277 276 5 S701 883 834 278 277 5 S701 884 835 279 278 5 S701 885 836 280 279 5 S701 886 837 281 280 5 S701 887 838 282 281 5 S701 888 839 283 282 5 S701 889 840 284 283 5 S701 890 841 <td></td> <td></td> <td>1</td> <td></td>			1	
828 272 271 5 S701 878 829 273 272 5 S701 879 830 274 273 5 S701 880 831 275 274 5 S701 881 832 276 275 5 S701 882 833 277 276 5 S701 883 834 278 277 5 S701 884 835 279 278 5 S701 885 836 280 279 5 S701 886 837 281 280 5 S701 887 838 282 281 5 S701 888 839 283 282 5 S701 889 840 284 283 5 S701 890 841 285 284 5 S701 891 842 <td></td> <td></td> <td></td> <td></td>				
829 273 272 5 S701 879 830 274 273 5 S701 880 831 275 274 5 S701 881 832 276 275 5 S701 882 833 277 276 5 S701 883 834 278 277 5 S701 884 835 279 278 5 S701 885 836 280 279 5 S701 886 837 281 280 5 S701 887 838 282 281 5 S701 888 839 283 282 5 S701 889 840 284 283 5 S701 890 841 285 284 5 S701 891 842 286 285 5 S701 892				
830 274 273 5 \$701 880 831 275 274 5 \$701 881 832 276 275 5 \$701 882 833 277 276 5 \$701 883 834 278 277 5 \$701 884 835 279 278 5 \$701 885 836 280 279 5 \$701 886 837 281 280 5 \$701 887 838 282 281 5 \$701 888 839 283 282 5 \$701 889 840 284 283 5 \$701 890 841 285 284 5 \$701 891 842 286 285 5 \$701 892				
831 275 274 5 S701 881 832 276 275 5 S701 882 833 277 276 5 S701 883 834 278 277 5 S701 884 835 279 278 5 S701 885 836 280 279 5 S701 886 837 281 280 5 S701 887 838 282 281 5 S701 888 839 283 282 5 S701 889 840 284 283 5 S701 890 841 285 284 5 S701 891 842 286 285 5 S701 892				
832 276 275 5 S701 882 833 277 276 5 S701 883 834 278 277 5 S701 884 835 279 278 5 S701 885 836 280 279 5 S701 886 837 281 280 5 S701 887 838 282 281 5 S701 888 839 283 282 5 S701 889 840 284 283 5 S701 890 841 285 284 5 S701 891 842 286 285 5 S701 892				
833 277 276 5 S701 883 834 278 277 5 S701 884 835 279 278 5 S701 885 836 280 279 5 S701 886 837 281 280 5 S701 887 838 282 281 5 S701 888 839 283 282 5 S701 889 840 284 283 5 S701 890 841 285 284 5 S701 891 842 286 285 5 S701 892				
834 278 277 5 S701 884 835 279 278 5 S701 885 836 280 279 5 S701 886 837 281 280 5 S701 887 838 282 281 5 S701 888 839 283 282 5 S701 889 840 284 283 5 S701 890 841 285 284 5 S701 891 842 286 285 5 S701 892				
834 278 277 5 S701 884 835 279 278 5 S701 885 836 280 279 5 S701 886 837 281 280 5 S701 887 838 282 281 5 S701 888 839 283 282 5 S701 889 840 284 283 5 S701 890 841 285 284 5 S701 891 842 286 285 5 S701 892				
835 279 278 5 S701 885 836 280 279 5 S701 886 837 281 280 5 S701 887 838 282 281 5 S701 888 839 283 282 5 S701 889 840 284 283 5 S701 890 841 285 284 5 S701 891 842 286 285 5 S701 892				
836 280 279 5 S701 886 837 281 280 5 S701 887 838 282 281 5 S701 888 839 283 282 5 S701 889 840 284 283 5 S701 890 841 285 284 5 S701 891 842 286 285 5 S701 892				
837 281 280 5 S701 887 838 282 281 5 S701 888 839 283 282 5 S701 889 840 284 283 5 S701 890 841 285 284 5 S701 891 842 286 285 5 S701 892				
838 282 281 5 S701 888 839 283 282 5 S701 889 840 284 283 5 S701 890 841 285 284 5 S701 891 842 286 285 5 S701 892				
839 283 282 5 S701 889 840 284 283 5 S701 890 841 285 284 5 S701 891 842 286 285 5 S701 892				
840 284 283 5 S701 890 841 285 284 5 S701 891 842 286 285 5 S701 892				
841 285 284 5 S701 891 842 286 285 5 S701 892				
842 286 285 5 S701 892				
843 287 286 5 \$701 893				
844 288 287 5 S701 894				
845 895				
846 896			 	
847 897			+	
848 898			+	
849 899			_	1
850 900		 	1	

7	namb	Eron Mo	Пас	Conduct	Dwnh	Exc	-m -πο	Тас	* Conduct	Drnh	Erc	מים מים	Пас	Condition
L		From To	_				301	_	Conduct					Conduct
	1	1 2		.178E+01	57 50				.840E-01	113		176		.701E+00
	2	1 145		.576E+00	58		301		910E-01	114		301	1	.840E-01
	3	2 3		.178E+01	59	18	19		.146E+01	115		301	1	.840E-01
	4	2 146		.576E+00	60		162		.701E+00	116	33	34	1	.146E+01
	5	3 4		.178E+01	61		301	1	.840E-01	117		177	4	.701E+00
	6	3 147		.576E+00	62		301	1	.820E-01	118		301	1	.840E-01
	7	4 5		.160E+01	63	19	20		.146E+01	119		301	1	.840E-01
	8	4 148		.576E+00	64		163		.701E+00	120	34	35	1	.146E+01
	9	5 6		.146E+01	65		301	1	.840E-01	121		178	4	.701E+00
	10	5 149	4	.701E+00	66		301	1	.680E-01	122		301	1	.840E-01
	11	5 301	1	.840E-01	67	20	21	1	.129E+01	123		301	1	.840E-01
	12	6 7	1	.146E+01	68		164	4	.701E+00	124	35	36	1	.146E+01
	13	6 150	4	.701E+00	69		301	1	.840E-01	125		179	4	.701E+00
	14	6 301	1	.840E-01	70		301	1	.490E-01	126		301	1	.840E-01
	15	7 8	1	.146E+01	71	21	22	1	.115E+01	127		301	1	.840E-01
	16	7 151	4	.701E+00	72		165	4	.889E+00	128	36	37	1	.146E+01
	17	7 301	1	.840E-01	73	21	301	1	.900E-01	129	36	180	4	.701E+00
	18	7 301	1	.240E-01	74	22	23	1	.115E+01	130		301	1	.840E-01
	19	8 9	1	.146E+01	75		166	4	.889E+00	131		301	1	.840E-01
	20	8 152		.701E+00	76	22	301	1	.710E-01	132	37	38	1	.146E+01
	21	8 301	i	.840E-01	77	23	24	1	.115E+01	133		181	4	.701E+00
	22	8 301	î	.490E-01	78		167	4	.889E+00	134		301	1	.840E-01
	23	9 10	1	.146E+01	79	23	301	1	.320E-01	135	37	301	ī	.840E-01
	24	9 153	4	.701E+00	80	24	25	1	.115E+01	136	38	.39	ī	.146E+01
	25	9 301	1	.840E-01	81	24		4	.889E+00	137		182	4	.701E+00
	26	9 301	1	.680E-01	82	24		1	.131E+00	138	38	301	1	.840E-01
	27	10 11	1	.146E+01	83			1	.320E-01	139		301	ī	.840E-01
	28	10 11	4	.701E+00	84	25	26	1	.115E+01	140	39	40	ī	.146E+01
	28 29	10 154	1	.840E-01	85		169	4	.889E+00	141		183	4	.701E+00
	30	10 301	1	.820E-01	86		301	1	.111E+00	142		301	1	.840E-01
	31	10 301	1	.820E-01	87		301	1	.710E-01	143		301	i	.840E-01
	32	11 155	4	.701E+00	88	26		i	.129E+01	144	40	41	ī	.146E+01
	33	11 301	1	.840E-01	89		170	4	.889E+00	145		184	4	.701E+00
	34	11 301	1	.910E-01	90		301	1	.940E-01	146		301	1	.840E-01
	35	12 13	1	.146E+01	91		301	1	.900E-01	147		301	i	.840E-01
	36	12 156	4	.701E+00	92	27		ī	.146E+01	148	41	42	ī	.146E+01
	37	12 156	1	.840E-01	93		171	4	.701E+00	149		185	4	.701E+00
	38	12 301	1	.970E-01	93		301	1	.840E-01	150	41		1	.840E-01
	38 39	12 301		.146E+01	95		301	1	.840E-01	151	41		1	.840E-01
	40	13 14	1	.701E+00	96	28		1	.146E+01	152	42	43	ī	.129E+01
			4	.840E-01	96		172	4	.701E+00	153		186	4	.701E+00
	41 42	13 301 13 301	1	.100E+00	98			1	.840E-01	154	42		1	.840E-01
	42		1	.146E+01	98	28		1	.840E-01	155	42		1	.840E-01
			1	.146E+01				1	.146E+01	156	42		1	.115E+01
	44	14 158	4		100 101	29	173	4	.701E+00	157	43		4	.889E+00
	45 46	14 301	1	.840E-01	101	29		1	.840E-01	158	43		1	.900E-01
		14 301	1	.101E+00	102		301	1		159		301	1	.124E+00
	47	15 16 15 150					301		.146E+01	160	44			.124E+00
	48	15 159		.701E+00	104				.701E+00	161		188		.889E+00
	49	15 301		.840E-01	105		174	_		161		301		
	50 51	15 301		.100E+00	106		301			1		301		.920E-01
	51	16 17	_	.146E+01	107		301			163	44			.920E-01
	52	16 160		.701E+00	108	31				164				.889E+00
	53	16 301		.840E-01	109		175			165		189		.889E+00
	54	16 301		.970E-01	110		301	1		166		301		.115E+01
	55 56	17 18		.146E+01	111		301	1		167	46	47 190	4	.889E+00
	56	17 161	4	.701E+00	112	32	. 33	1	. 140ETUI	1 100	40	130	-	.0092.00

Brph	From To	Tag	Conduct	Brnh	From	To ?	Taq	Conduct	Brnh	Fro	on To	Tag	Conduct
169	46 301		.149E+00	225	60 30			.840E-01	281		301		.138E+00
		_	.320E-01	226	60 30			.840E-01	282		301		
170	46 301	1											.710E-01
171	47 48	- 1	.115E+01	227		2		.146E+01	283	75	76		.120E+01
172	47 191	4	.889E+00	228	61 20	5	4	.701E+00	284	75	219	4	.889E+00
173	47 301	1	.125E+00	229	61 30	1	1	.840E-01	285	75	301	1	.157E+00
174	47 301	1	.710E-01	230	61 30	1	1	.840E-01	286	75	301		.900E-01
175	48 49	ī	.129E+01	231		3		.146E+01	287	76	77		.125E+01
176	48 192	4	.889E+00	232	62 20			.701E+00	288	76	220		.655E+00
177	48 301	1	.970E-01	233	62 30	1	1	.840E-01	289	76	301	1	.171E+00
178	48 301	1	.900E-01	234	62 30	1	1	.840E-01	290	76	301	1	.980E-01
179	49 50	1	.146E+01	235	63 6	4	1	.146E+01	291	77	78	1	.210E+01
180	49 193	4	.701E+00	236	63 20			.701E+00	292	77	221		.655E+00
					63 30			.840E-01	293	77	301		
181	49 301	1	.840E-01	237								_	-172E+00
182	49 301	1	.840E-01	238	63 30			.840E-01	294	77	301		.980E-01
183	50 51	1	.146E+01	239	64 6	5	1	.108E+01	295	78	79	1	.172E+01
184	50 194	4	.701E+00	240	64 20	8	4	.701E+00	296	78	222	4	.542E+00
185	50 301	1	.840E-01	241	64 30	1	1	.840E-01	297	78	301	1	.131E+00
186	50 301	ī	.840E-01	242	64 30			.840E-01	298	78	301		.920E-01
187	51 52	1	.146E+01	243		6		.992E+00	299	79	80		.992E+00
188	51 195	4	.701E+00	244	65 20			.990E+00	300	79	223	4	.815E+00
189	51 301	1	.840E-01	245	65 30	1	1	.920E-01	301	79	301	1	.111E+00
190	51 301	1	.840E-01	246	65 30	1	1	.940E-01	302	79	301	1	.920E-01
191	52 53	1	.146E+01	247	66 6	7	1	.172E+01	303	80	81	1	.108E+01
	52 196		.701E+00	248	66 21			.815E+00	304		224		.990E+00
192		4	1										
193	52 301	1	.840E-01	249	66 30			.920E-01	305	80	301		.940E-01
194	52 301	1	.840E-01	250	66 30			.111E+00	306	89	301		.920E-01
195	53 54	1	.146E+01	251	67 6	8	1	.210E+01	307	81	82	1	.146E+01
196	53 197	4	.701E+00	252	67 21	1	4	.542E+00	308	81	225	4	.701E+00
197	53 301	1	.840E-01	253	67 30	1	1	.920E-01	309	81	301	1	.840E-01
198	53 301	ī	.840E-01	254	67 30		1	.131E+00	310	81		1	.840E-01
199			.146E+01	255		9		.125E+01	311	82	83	ī	.146E+01
		1											4
200	54 198	4	.701E+00	256	68 21			.655E+00	312		226		.701E+00
201	54 301	1	.840E-01	257	68 30			.980E-01	313	82	301		.840E-01
202	54 301.	1	.840E-01	258	68 30	1	1	.172E+00	314	82	301	1	.840E-01
203	55 56	1	.146E+01	259	69 7	0	1	.120E+01	315	83	84	1	.146E+01
204	55 199	4	.701E+00	260	69 21	3	4	.655E+00	316	83	227	4	.701E+00
205	55 301	i	.840E-01	261	69 30			.980E-01	317	83	301		.840E-01
					69 30			.171E+00	318	83	301		.840E-01
206	55 301	1	.840E-01	262									
207	56 57	1	.146E+01	263		1		.115E+01	319	84	85	1	.146E+01
208	56 200	4	.701E+00	264	70 21			.889E+00	320	84	228		.701E+00
209	56 301	1	.840E-01	265	70 30	1	1	.900E-01	321	84	301	1	.840E-01
210	56 301	1	.840E-01	266	70 30	1	1	.157E+00	322	84	301	1	.840E-01
211	57 58	ī	.146E+01	267		2	1	.115E+01	323	85	86	1	.146E+01
212	57 201	4	.701E+00	268	71 21			.889E+00	324	85	229	4	.701E+00
							_					-	.840E-01
213	57 301	1	.840E-01	269	71 30		1	.710E-01	325		301	1	
214	57 301	1	.840E-01	270	71 30		1	.138E+00	326	85	301	1	.840E-01
215	58 59	1	.146E+01	271		3		.115E+01	327	86	87	1	.146E+01
216	58 202	4	.701E+00	272	72 21	.6	4	.889E+00	328	86	230	4	.701E+00
217	58 301		.840E-01	273	72 30		1	.320E-01	329	86	301		.840E-01
218	58 301		.840E-01	274	72 30			.670E-01	330		301		.840E-01
						4		.115E+01	331	87	88		.146E+01
219	59 60		.146E+01	275									
220	59 203	4	.701E+00	276	73 21			.889E+00	332		231	_	.701E+00
221	59 301	1	.840E-01	277	73 30			.670E-01	333		301		.840E-01
222	59 301	1	.840E-01	278	73 30	1	1	.320E-01	334	87	301	1	.840E-01
223	60 61	1	.146E+01	279		' 5	1	.115E+01	335	88	89	1	.146E+01
224	60 204		.701E+00	280	74 21		4	.889E+00			232	4	.701E+00
		-		,			-					-	1

```
Brnh From To Tag Conduct
                             Brnh From To Tag Conduct!
                                                          Brnh From To Tag Conduct
 337
      88 301
                1 .840E-01
                             393 102 301
                                             1 .900E-01
                                                          449 116 301
                                                                         1 .840E-01
 338
      88
          301
                1 .840E-01
                             394 103 104
                                             1 .146E+01
                                                                         1 .146E+01
                                                          450 117 118
 339
      89
           90
                1 .146E+01
                             395 103
                                      247
                                             4 .701E+00
                                                          451 117
                                                                  261
                                                                         4 .701E+00
 340
          233
      89
                4 .701E+00
                             396 103 301
                                             1 .840E-01
                                                          452 117
                                                                  301
                                                                         1 .840E-01
 341
      89
          301
                1 .840E-01
                             397 103 301
                                             1 .840E-01
                                                          453 117 301
                                                                         1 .840E-01
 342
      89
          301
                1 .840E-01
                             398 104 105
                                             1 .146E+01
                                                          454 118 119
                                                                         1 .129E+01
 343
      90
           91
                1
                  .146E+01
                             399 104
                                      248
                                              .701E+00
                                             4
                                                          455
                                                              118 262
                                                                         4 .701E+00
 344
      90
          234
                4 .701E+00
                             400 104 301
                                             1 .840E-01
                                                          456 118 301
                                                                         1 .840E-01
 345
      90
          301
                1 .840E-01
                             401 104 301
                                             1 .840E-01
                                                          457 118 301
                                                                         1 .840E-01
 346
      90
          301
                1 .840E-01
                             402 105
                                      106
                                             1 .146E+01
                                                          458 119 120
                                                                         1 .115E+01
 347
      91
          92
                1 .146E+01
                             403 105
                                      249
                                              .701E+00
                                             4
                                                          459
                                                              119
                                                                  263
                                                                         4 .889E+00
 348
      91 235
                4 .701E+00
                             404 105 301
                                             1 .840E-01
                                                          460 119
                                                                  301
                                                                         1 .900E-01
 349
      91 301
                1 .840E-01
                             405 105 301
                                             1 .840E-01
                                                          461 119 301
                                                                         1 .940E-01
 350
      91
          301
                                             1 .146E+01
                1 .840E-01
                             406 106
                                     107
                                                          462 120 121
                                                                         1 .115E+01
 351
      92
          93
                1 .146E+01
                             407 106
                                      250
                                             4
                                              .701E+00
                                                          463 120 264
                                                                         4 .889E+00
 352
      92 236
                                             1 .840E-01
                  .701E+00
                             408 106 301
                                                          464 120 301
                                                                         1 .710E-01
 353
      92 301
                1 .840E-01
                             409 106 301
                                             1 .840E-01
                                                          465 120 301
                                                                         1 .111E+00
 354
      92
          301
                1 .840E-01
                             410 107 108
                                             1 .146E+01
                                                          466 121 122
                                                                         1 .115E+01
 355
      93
          94
                1
                   .146E+01
                             411 107
                                      251
                                              .701E+00
                                                          467 121 265
                                                                         4 .889E+00
 356
      93 237
                4 .701E+00
                             412 107
                                      301
                                             1 .840E-01
                                                          468 121 301
                                                                         1 .320E-01
. 357
                  .840E-01
      93 301
                1
                             413 107 301
                                             1 .840E-01
                                                          469 121 301
                                                                         1 .131E+00
                1 .840E-01
 358
      93 301
                             414 108 109
                                             1 .146E+01
                                                          470 122 123
                                                                         1 .115E+01
 359
      94
          95
                1 .146E+01
                                                          471 122 266
                             415 108
                                      252
                                             4 .701E+00
                                                                         4 .889E+00
      94 238
 360
                4 .701E+00
                                                          472 122 301
                             416 108
                                      301
                                             1 .840E-01
                                                                         1 .320E-01
 361
      94
          301
                1 .840E-01
                             417 108 301
                                             1 .840E-01
                                                          473 123 124
                                                                         1 .115E+01
 362
      94 301
                1 .840E-01
                                             1 .146E+01
                                                          474 123 267
                             418 109 110
                                                                         4 .889E+00
                                             4 .701E+00
 363
      95
           96
                                                          475 123 301
                1 .146E+01
                             419 109
                                      253
                                                                         1 .710E-01
 364
      95 239
                4 .701E+00
                             420 109
                                      301
                                             1 .840E-01
                                                          476
                                                             124
                                                                  125
                                                                         1 .129E+01
 365
      95
         301
                  .840E-01
                             421 109 301
                                             1 .840E-01
                                                          477 124 268
                                                                         4 .889E+00
                1 .840E-01
 366
      95
          301
                             422 110 111
                                             1 .146E+01
                                                          478 124 301
                                                                         1 .900E-01
 367
      96
           97
                1 .129E+01
                             423 110
                                              .701E+00
                                      254
                                             4
                                                          479
                                                              125 126
                                                                         1 .146E+01
 368
      96
          240
                4 .701E+00
                                             1 .840E-01
                             424 110 301
                                                          480 125 269
                                                                         4 .701E+00
 369
      96
          301
                1
                  .840E-01
                             425 110 301
                                             1 .840E-01
                                                          481 125 301
                                                                         1 .490E-01
          301
 370
                                             1 .146E+01
      96
                1
                  .840E-01
                             426 111 112
                                                          482 125 301
                                                                         1 .840E-01
 371
      97
          98
                1 .115E+01
                             427 111 255
                                             4 .701E+00
                                                          483 126 127
                                                                         1 .146E+01
 372
      97
          241
                  .889E+00
                             428 111 301
                                             1 .840E-01
                                                          484 126 270
                                                                         4 .701E+00
                1 .900E-01
 373
      97
          301
                             429 111 301
                                             1 .840E-01
                                                          485 126 301
                                                                         1 .680E-01
 374
                             430 112
      97
          301
                1
                  .970E-01
                                              .146E+01
                                      113
                                             1
                                                          486
                                                              126 301
                                                                         1 .840E-01
 375
      98
           99
                1 .115E+01
                             431 112 256
                                             4 .701E+00
                                                          487 127 128
                                                                         1 .146E+01
                  .889E+00
 376
      98 242
                             432 112 301
                                             1 .840E-01
                4
                                                          488 127 271
                                                                         4 .701E+00
                1 .710E-01
 377
      98
          301
                                             1 .840E-01
                             433 112 301
                                                          489 127 301
                                                                         1 .820E-01
 378
      98
          301
                   .125E+00
                             434 113
                                      114
                                              .146E+01
                                                          490 127
                1
                                             1
                                                                  301
                                                                         1 .840E-01
                1 .115E+01
 379
      99
         100
                             435 113 257
                                             4 .701E+00
                                                          491 128 129
                                                                         1 .146E+01
 380
      99
          243
                4
                  .889E+00
                             436 113 301
                                             1 .840E-01
                                                          492 128 272
                                                                         4 .701E+00
                1 .320E-01
                                             1 .840E-01
 381
      99
          301
                             437 113 301
                                                                         1 .910E-01
                                                          493 128 301
 382
      99
          301
                1
                  .149E+00
                             438 114
                                      115
                                             1 .146E+01
                                                          494 128 301
                                                                         1 .840E-01
                1 .115E+01
                                             4 .701E+00
 383 100 101
                             439 114 258
                                                          495 129 130
                                                                         1 .146E+01
 384 100 244
                  .889E+00
                                                                         4 .701E+00
                4
                             440 114 301
                                             1 .840E-01
                                                          496 129 273
                                                                         1 .970E-01
 385
     100
          301
                1 .320E-01
                             441 114 301
                                             1 .840E-01
                                                          497 129 301
 386 101 102
                1
                   .115E+01
                             442 115 116
                                             1 .146E+01
                                                          498 129 301
                                                                         1 .840E-01
 387 101 245
                  .889E+00
                             443 115 259
                                             4 .701E+00
                                                          499 130 131
                                                                         1 .146E+01
 388 101 301
                                             1 .840E-01
                  .920E-01
                1
                             444 115 301
                                                          500 130 274
                                                                         4 .701E+00
 389
     101
         301
                  .710E-01
                             445 115 301
                                             1 .840E-01
                                                          501 130 301
                                                                         1 .100E+00
 390 102 103
                1 .129E+01
                             446 116 117
                                             1 .146E+01
                                                          502 130 301
                                                                         1 .840E-01
                  .889E+00
                                             4 .701E+00
 391 102 246
                             447 116 260
                                                          503 131 132
                                                                         1 .146E+01
 392 102 301
                1 .124E+00
                                             1 .840E-01
                                                         504 131 275
                             448 116 301
                                                                         4 .701E+00
```

```
Brnh From To Tag Conduct
                                                      Brnh From To Tag Conduct
Brnh From To Tag Conduct
                                          5 .174E+03
                           561 158 157
                                                       617 214 213
                                                                      5 .174E+03
505 131 301
              1 .101E+00
              1 .840E-01
                           562 159 158
                                          5 .174E+03
                                                       618 215 214
                                                                      5 .174E+03
506 131 301
                                          5 .174E+03
                           563 160 159
                                                       619 216 215
                                                                      5 .174E+03
              1 .146E+01
507 132 133
              4 .701E+00
                                          5 .174E+03
                                                       620 217 216
                                                                      5 .174E+03
                           564 161 160
508 132 276
                                          5 .174E+03
                                                      621 218 217
                                                                      5 .174E+03
              1 .100E+00
                           565 162 161
509 132
        301
              1 .840E-01
                                          5 .174E+03
                                                       622 219 218
                                                                       .174E+03
                           566 163 162
510 132 301
              1 .146E+01
                           567 164 163
                                          5 .174E+03
                                                       623 220 219
                                                                      5 .174E+03
511 133 134
              4 .701E+00
                           568 165 164
                                          5 .174E+03
                                                       624 221 220
                                                                      5
                                                                       .174E+03
512 133 277
                                                      625 222 221
                                                                       .174E+03
513 133
        301
              1 .970E-01
                           569 166 165
                                          5 .174E+03
                                           .174E+03
                                                       626 223 222
                                                                       .174E+03
              1 .840E-01
                           570 167 166
514 133 301
                                          5 .174E+03
                                                                      5 .174E+03
                                                       627 224 223
515 134 135
              1 .146E+01
                           571 168 167
              4 .701E+00
                                          5 .174E+03
                                                       628 225 224
                                                                      5
                                                                       .174E+03
                           572 169 168
516 134 278
                                          5 .174E+03
                                                                      5 .174E+03
                                                      629 226 225
              1 .910E-01
517 134 301
                           573 170 169
                                          5 .174E+03
              1 .840E-01
                           574 171 170
                                                       630 227 226
                                                                      5 .174E+03
518 134 301
                                          5 .174E+03
                                                       631 228 227
                                                                      5 .174E+03
              1 .146E+01
519 135 136
                           575 172 171
                                                                      5 .174E+03
              4 .701E+00
                           576 173 172
                                          5
                                            .174E+03
                                                       632 229 228
520 135 279
                                          5 .174E+03
                                                                       .174E+03
                           577 174 173
                                                       633 230 229
              1 .820E-01
521 135
        301
                                                                      5 .174E+03
522 135 301
              1 .840E-01
                           578 175 174
                                          5 .174E+03
                                                       634 231 230
                                          5 .174E+03
                                                       635 232 231
                                                                       .174E+03
                           579 176 175
              1 .146E+01
523 136 137
                                                                       .174E+03
              4 .701E+00
                           580 177 176
                                          5
                                            .174E+03
                                                       636 233 232
524 136 280
                                          5 .174E+03
                                                       637 234 233
                                                                       .174E+03
                           581 178 177
525 136
        301
               1 .680E-01
                                                                      5 .174E+03
                                          5 .174E+03
                                                       638 235 234
               1 .840E-01
                           582 179 178
526 136 301
              1 .146E+01
                           583 180 179
                                          5 .174E+03
                                                       639 236
                                                               235
                                                                      5 .174E+03
527 137 138
                                                       640 237 236
                                                                      5 .174E+03
                                          5 .174E+03
               4 .701E+00
                           584 181 180
528 137 281
                                          5 .174E+03
                                                       641 238 237
                                                                      5 .174E+03
              1 .490E-01
                           585 182 181
529 137
        301
                                                                      5 .174E+03
               1 .840E-01
                           586 183 182
                                          5 .174E+03
                                                       642 239 238
530 137 301
                                            .174E+03
                                                       643 240 239
                                                                      5 .174E+03
              1 .146E+01
                            587 184 183
531 138 139
                                          5 .174E+03
                                                       644 241 240
                                                                      5 .174E+03
               4 .701E+00
                            588 185 184
532 138
        282
                                                                      5 .174E+03
                                            .174E+03
              1 .240E-01
                                                       645 242 241
                           589 186 185
533 138
        301
                                                                      5 .174E+03
                                          5 .174E+03
                                                       646 243 242
               1 .840E-01
                            590 187 186
534 138
        301
                                                                      5 .174E+03
               1 .146E+01
                                          5 .174E+03
                                                       647 244 243
                            591 188 187
        140
535 139
                                          5 .174E+03
                                                                      5 .174E+03
                            592 189 188
                                                       648 245 244
               4 .701E+00
536 139
        283
                                                                      5 .174E+03
                                          5 .174E+03
               1 .840E-01
                                                       649 246 245
537 139
                            593 190 189
        301
                                                       650 247
                            594 191 190
                                          5 .174E+03
                                                               246
                                                                      5 .174E+03
               1 .160E+01
538 140 141
                                                                      5 .174E+03
                                          5 .174E+03
                                                       651 248 247
               4 .701E+00
539 140 284
                            595 192 191
                                                                      5 .174E+03
                                           5 .174E+03
                                                       652 249 248
               1 .840E-01
                            596 193 192
540 140
        301
                                          5 .174E+03
                                                                      5 .174E+03
               1 .178E+01
                                                       653 250 249
                            597 194 193
541 141 142
                                                                      5 .174E+03
               4 .576E+00
                                           5
                                            .174E+03
                                                       654 251 250
                            598 195 194
542 141 285
                                            .174E+03
                                                                      5 .174E+03
                                                       655 252 251
                            599 196 195
               1 .178E+01
543 142
        143
                                                       656 253 252
                                                                      5 .174E+03
               4 .576E+00
                                            .174E+03
                            600 197 196
                                           5
544 142 286
                                                                      5 .174E+03
                            601 198 197
                                            .174E+03
                                                       657 254
                                                               253
545 143 144
               1 .178E+01
                                            .174E+03
                                                                      5 .174E+03
                                                       658 255 254
               4 .576E+00
                            602 199 198
546 143 287
                                                                      5 .174E+03
                                            .174E+03
                                                       659 256 255
               4 .576E+00
                            603 200 199
547 144
        288
                                                                      5 .174E+03
                                            .174E+03
                                                       660 257
                                                               256
                .174E+03
                            604 201 200
                                           5
548 145 302
                                                                      5 .174E+03
                                                       661 258 257
               5 .174E+03
                                    201
                                            .174E+03
                            605 202
549 146 145
                                                       662 259 258
                                            .174E+03
                                                                      5 .174E+03
                            606 203 202
550 147
        146
               5
                 .174E+03
                                                       663 260 259
                                                                      5 .174E+03
               5 .174E+03
                                           5 .174E+03
                            607 204 203
551 148 147
                                                                      5 .174E+03
                            608 205 204
                                            .174E+03
                                                       664 261 260
552 149 148
               5 .174E+03
                                                                      5 .174E+03
                                            .174E+03
                                                       665 262 261
                            609
                                206 205
               5 .174E+03
553 150 149
                                                                      5 .174E+03
                            610 207 206
                                            .174E+03
                                                       666 263 262
554 151 150
               5
                 .174E+03
                                           5 .174E+03
                                                                      5 .174E+03
                                                       667 264 263
               5 .174E+03
                            611 208 207
555 152 151
                                                                      5 .174E+03
                            612 209 208
                                            .174E+03
                                                       668 265 264
                                           5
               5 .174E+03
556 153 152
                                                                      5 .174E+03
                                           5 .174E+03
                                                       669 266 265
                            613 210 209
557 154 153
               5
                 .174E+03
                                                                      5 .174E+03
                                                        670 267 266
                 .174E+03
                                           5 .174E+03
                            614 211 210
               5
558 155 154
                                                                        .174E+03
                                                        671 268
                                           5 .174E+03
                                                               267
                                                                      5
                 .174E+03
                            615 212 211
559 156 155
                                                       672 269 268
                                                                      5 .174E+03
                                           5 .174E+03
               5 .174E+03
                           616 213 212
560 157 156
```

```
Brnh From To Tag Conduct
673 270 269
                 5 .174E+03
                 5 .174E+03
674 271 270
                 5 .174E+03
675 272 271
676 273 272
677 274 273
                 5 .174E+03
5 .174E+03
678 275 274
                 5 .174E+03
679 276 275
                 5 .174E+03
                 5 .174E+03
5 .174E+03
5 .174E+03
680 277 276
681 278 277
682 279 278
683 280 279
                 5 .174E+03
684 281 280
685 282 281
                 5 .174E+03
5 .174E+03
686 283 282
                  5 .174E+03
                 5 .174E+03
687 284 283
                 5 .174E+03
5 .174E+03
5 .174E+03
688 285 284
689 286 285
690 287 286
691 288 287
                  5 .174E+03
```

TASS GENERAL INPUT MENU - SI Units

Are these inputs correct (Y/N) ? Y

(1) Case Title: TALSR(METRIC)----RUN 2. COMPLEX MODEL 149.7 kg/hr (330 lbm/hr) (2) Nodes 288 (3) Constant Temperatures 2 (4) Unique Exponents 0 (5) Temperature Dependent Conductances 0 (6) Temperature Dependent Heat Inputs 0 (7) Computational Accuracy .0100 (8) Starting Temperature 25.0

NODE	TEMPERATURE	ABSOLUTE VALUE OF THETA (b)
	(Celsius)	(Celsius)
5	26.34	13.66
6	26.63	13.37
7	26.91	13.09
8	27.19	12.81
9	27.42	12.58
10	27.62	12.38
11	27.77	12.23
12	27.88	12.12
13	27.95	12.05
14	27.98	12.02
15	27.97	12.03
16	27.93	12.07
17	27.85	12.15
18	27.73	12.27
19	27.57	12.43
20	27.38	12.62
21	27.15	12.85
22	27.01	12.99
23	27.02	12.98
24	27.29	12.71
25	27.52	12.48
26	27.7	12.46
27	27.84	
		12.16
28	27.93	12.07
29 30	27.99	12.01
	28.04	11.96
31	28.07	11.93
32	28.1	11.9
33 .	28.12	11.88
34 ·	28.13	11.87
35	28.14	11.86
36	28.15	11.85
37	28.15	11.85
38	28.15	11.85
39	28.14	11.86
40	28.12	11.88
41	28.09	11.91
42	28.04	11.96
43	27.94	12.06
44	27.77	12.23
45	27.61	12.39
46	27.78	12.22
47	27.93	12.07
48	28.03	11.97
49	28.13	11.87
50	28.19	11.81
51	28.24	11.76
52	28.27	11.73

53	28.3	11.7
54	28.32	11.68
55	28.34	11.66
56	28.35	11.65
57	28.37	11.63
58	28.38	11.62
	28.39	11.61
59 60	28.41	11.59
	28.42	11.58
61	28.44	11.56
62	28.47	11.53
63	28.5	11.5
64	28.56	11.44
65		11.2
66	28.8	11.02
67	28.98	10.96
68	29.04	11.96
69	29	
70	28.78	11.22
71	28.53	11.47
72	28.31	11.69
73	28.32	11.68
74	28.57	11.43
75	28.83	11.17
76	29.07	10.93
77	29.14	10.86 10.91
78	29.09	
79	28.93	11.07
80	28.72	11.28
81	28.68	11.32
82	28.67	11.33
83	28.66	11.34
84	28.66	11.34
85	28.66	11.34
86	28.67	11.33
87	28.67	11.33
88	28.68	11.32
89	28.68	11.32
90	28.68	11.32
91	28.68	11.32
92	28.68	11.32
93	28.67	11.33
94	28.66	11.34
95	28.63	11.37
96	28.59	11.41
97	28.51	11.49
98	28.43	11.57
99	28.31	11.69
100	28.17	11.83
101	28.34	11.66
102	28.52	11.48

103	28.63	11.37
104	28.69	11.31
105	28.74	11.26
106	28.78	11.22
107	28.8	11.2
108	28.82	11.18
109	28.84	11.16
110	28.85	11.15
111	28.85	11.15
112	28.86	11.14
113	28.86	11.14
114	28.85	11.15
115	28.84	11.16
116	28.81	11.19
117	28.77	11.23
118	28.7	11.3
119	28.58	11.42
120	28.44	11.56
121	28.25	11.75
122	28.01	11.99
123	28.02	11.98
124	28.16	11.84
125	28.4	11.6
126	28.59	11.41
127	28.74	11.26
128	28.87	11.13
129	28.96	11.04
130	29.01	10.99
131	29.03	10.97
132	29.02	10.98
133	28.97	11.03
134	28.89	11.11
135	28.77	11.23
136	28.61	11.39
137	28.4	11.6
138	28.17	11.83
139	27.92	12.08
140	27.67	12.33

INPLIT DATA					
TIT					
TIT		٠,		-	ı
TIT		i			
TIT		•	1		
111					
INPIT		4		_	
INPI		a			
dN			_		
Ä		;		•	1
4		٩			
		i	i	4	ļ
		۰			١

		(1)	(W/CIII-K)			(ma)	(ow)	1
0.318	0.015	0.053	4.01	1900.00000	0.707	0.635		(sq. cm.) 0.535
Nodal Fin Sharing Pairs Channel Width (b)	Channel Width (b)	Effective Diameter	Heat Transfer Coefficent (h)	Ε	Lambda	R-Theta	b2-Term	Tom
	(cm)	(cm)	(W/sqcm-K)	(1/cm)			(cm)	(GE)
542	1.143	0.10192	0 03626	1 08929	3 473	442		
1	1.143	0.10192	0.03626	1 08929	2 479	4 423	0.401	0.682
7-40	1.143	0.10192	0.03626	1.08929	3.473	1 102	0.404	0.668
8-39	1.143	0.10192	0.03626	1.08929	3.473	1 080	904.0	20.0
86-98	1.143	0.10192	0.03626	1.08929	3.473	1.062	0.522	0.633
10-37	1.143	0.10192	0.03626	1.08929	3.473	1.045	0.535	0.621
11-36	1.143	0.10192	0.03626	1.08929	3.473	1.032	0.545	0.598
12-35	1.143	0.10192	0.03626	1.08929	3.473	1.022	0.553	0.590
13-34	1.143	0.10192	0.03626	1.08929	3.473	1.015	0.559	0.584
£-33	1.143	0.10192	0.03626	1.08929	3.473	1.012	0.562	0.581
15-32	1.143	0.10192	0.03626	1.08929	3.473	1.011	0.562	0.581
16.3	1.143	0.10192	0.03626	1.08929	3.473	1.012	0.562	0.581
87.	1.143	0.10192	0.03626	1.08929	3.473	1.016	0.558	0.585
87-91	1.143	0.10192	0.03626	1.08929	3.473	1.022	0.553	0.590
97-61	1.143	0.10192	0.03626	1.08929	3.473	1.030	0.547	0.596
25.50	1.143	0.10192	0.03626	1.08929	3.473	1.038	0.541	0.602
07-17	401.1	0.101/6	0.03629	1.08986	3.331	1.045	0.514	0.590
8 7 8	908.0	0.10008	0.03670	1.09596	2.425	1.041	0.360	0.448
57-57	0.230	0.09038	0.03928	1.13381	1.399	1.021	0.093	0.203
/0-97	2.037	0.10396	0.03578	1.08214	990'6	1.153	0.936	1.101
90 90	56.	0.10301	0.03600	1.08545	5.075	1.114	0.674	0.822
23.62	1.104	0.10208	0.03622	1.08873	3.630	1.075	0.534	0.651
\$ 62 62 73	1.143	0.10192	0.03626	1.08929	3.473	1.057	0.525	0.618
3 6	2 2 2	0.10192	0.03626	1.08929	3.473	1.047	0.533	0.610
70.00	2.45	28101.0	0.03626	1.08929	3.473	1.039	0.540	0.603
5 8	1.143	0.10192	0.03626	1.08929	3.473	1.033	0.545	0.598
00-15	1.143	0.10192	0.03626	1.08929	3.473	1.029	0.548	0.595
25-25	1.143	0.10192	0.03626	1.08929	3.473	1.025	0.551	0.592
8 3	1.143	0.10182	0.03626	1.08929	3.473	1.022	0.553	0.590
3 4 -51	1.143	0.10192	0.03626	1.08929	3.473	1.021	0.554	0.589
35-20	1.143	0.10192	0.03626	1.08929	3.473	1.018	0.557	0.586
20.50	1,143	0.10192	0.03626	1.08929	3.473	1.016	0.558	0.585
\$ 5 K	1.143	0.10192	0.03626	1.08929	3.473	1.015	0.559	0.584
3 5	1.143	0.10192	0.03626	1.08929	3.473	1.013	0.561	0.582
3	1.143	0.10182	0.03626	1.08929	3.473	1.011	0.562	0.581
	1.143	0.10192	0.03626	1.08929	3.473	1.010	0.563	0.580

0.578	0.578	0.559	0.418	0.185	1.488	0.950	0.645	0.604	0.603	0.602	0.600	0.599	0.598	0.596	0.595	0.594	0.593	0.592	0.590	0.589	0.587	0.586	0.585	0.583	0.581	0.580	0.579	0.576	0.555	0.407	0.151	0.976	0.719	0.582	0.573	0.579	0.582	0.585	0.585	0.585	0.585	0.584	0.584	0.583	0.582	
0.565	0.585	0.545	0.390	0.111	1.444	0.899	0.580	0.539	0.540	0.541	0.543	0.544	0.545	0.547	0.548	0.549	0.550	0.551	0.553	0.554	0.556	0.557	0.558	0.560	0.562	0.563	0.584	0.567	0.549	0.401	0.145	1.061	0.778	0.602	0.570	0.564	0.561	0.558	0.558	0.558	0.558	0.559	0.559	0.560	0.561	
1.008	1.008	1.008	1.013	1.014	1.045	1.043	1.042	1.040	1.039	1.037	1.035	1.034	1.032	1.030	1.029	1.027	1.026	1.025	1.022	1.021	1.019	1.018	1.016	1.014	1.012	1.010	1.009	1.006	1.004	1.003	1.001	0.929	0.958	0.988	1.002	1.009	1.013	1.016	1.017	1.017	1.017	1.015	1.015	1.014	1.013	
3.473	3.473	3.331	2.425	1.399	23.665	7.414	3.794	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.331	2.425	1.399	990'6	5.075	3.630	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	
1.08929	1.08929	1.08986	1.09596	1.13381	1.07932	1.08307	1.08820	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08986	1.09596	1.13381	1.08214	1.08545	1.08873	1.08929	1,08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	27000
0.03626	0.03626	0.03629	0.03670	0.03928	0.03560	0.03584	0.03618	0.03626	0.03626	0.03626	0.03626	0.03628	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03628	0.03626	0.03626	0.03626	0.03628	0.03626	0.03626	0.03626	0.03626	0.03626	0.03629	0.03670	0.03928	0.03578	0.03600	0.03622	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.0000
0.10192	0.10192	0.10176	0.10008	0.09038	0.10477	0.10369	0.10223	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10178	0.10008	0.09038	0.10396	0.10301	0.10208	0.10192	0.10192	0.10182	0.10192	0.10192	0.10192	0,10192	0,10192	0.10192	0.10192	0.10192	0.10192
1.143	1 143	1.104	0.808	0.296	2.931	1.850	1.225	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	_	1.143	1.143	1.143	1.104	0.808	0.296	2.037	1.496	1.184	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1 143	5-1-
41-50	42.49	43.48	44-47	45-46	46-99	47-98	48-97	49-96	50-95	51-94	52-83	53-82	54-91	55-90	56-89	57-88	58-87	59-86	60-85	61-84	62-83	63-82	64-81	65-80	66-79	67-78	21.	69-76	70-75	71-74	72-73	78-121	79-120	80-119	81-118	82-117	83-116	84-115	85-114	86-113	87-112	88-111	89-110	90-109	91-108	901-16

0.580	0.577	0.576	0.575	0.553	0.395	0.116	0.504	0.517	0.531	0.544	0.557	0.568	975.0	0.581	0.584	0.584	0.583	0.580	0.574	0.567	0.558	0.550	0.522	0.365	0.094
0.563	0.566	0.567	0.568	0.551	0.413	0.180	0.639	0.628	0.612	0.599	0.586	0.575	0.567	0.562	0.559	0.559	0.560	0.563	0.569	0.576	0.585	0.593	0.582	0.443	0.202
1.010	1.007	1.005	1.004	1.001	0.982	0.988	0.922	0.936	0.952	0.967	0.983	0.996	1.005	1.011	1.015	1.015	1.014	1.010	1.003	0.994	0.984	0.974	0.965	0.965	0.980
3.473	3.473	3.473	3.473	3.331	2.425	1.399	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.473	3.331	2.425	1.399
1.08929	1.08929	1.08929	1.08929	1.08986	1.09596	1,13381	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08929	1.08986	1.09596	1.13381
0.03626	0.03626	0.03626	0.03626	0.03629	0.03670	0.03928	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03629	0.03670	0.03928
0.10192	0.10192	0.10192	0.10192	0.10176	0.10008	0.09038	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10192	0.10176	0.10008	0.09038
1.143	1.143	1.143	1.143	1.104	0.808	0.296	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.104	0.808	0.298
93-106	94-105	95-104	96-103	97-102	98-101	99-100	103-140	104-139	105-138	106-137	107-136	108-135	109-134	110-133	111-132	112-131	113-130	114-129	115-128	116-127	117-126	118-125	119-124	120-123	121-122

(EJ)	(GE)	(ma)	The diameter inner pipe diameter inner pipe diameter	Superior de la constante de la		Cold Type Clarineter	nner bibe diameter	Pipe Area
		1	(W/cm-K)			(cm)		
318	0.015	0.0533	4.01	1900.00	0.707	0.635	(cm) 0.483	(\$4, cm.) 0.134
K-Value	Channel Width (b)	Channel Width (b) Effective Diameter	Heat Transfer Coefficent (h)	b-Tem	, dix	Diet behusen Nedes		3
	(cm)	(cm)	(W/sqcm-K)	(m _D)	(WW)	(cm)	Pinsmode	K - Value (W/K)
2								
2			1 260			0.302	N/A	1.7784
2			780			0.302	N/A	0.5762
2			NA ST			0.334	N/A	1.6043
. S			A/A			0.367	N/A	1.4612
9	1143	0.4040	1260	0000		0.367	N/A	0.7013
D	1.143	0.1019	0.03626	0.68200	0.01333	0.367	6.880	0.0854
9	1.143	0.1019	0.03626	0.0000	0.01314	0.367	6.880	0.0940
9	7600	0.0681	0.0322	0.02500	18210.0	0.367	6.880	0.0924
9	1.143	0 1019	963600	003690	0.00282	0.367	6.880	0.0241
Ξ	0.269	0680	0.03957	0.0000	0.01266	0.367	6.880	0.0907
12	1.143	0.1019	0.03626	000000	0.00658	0.367	6.860	0.0492
13	0.414	0.0945	0.0302.0	0.02100	0.0000	0.367	6.880	0.0893
4	1.143	0.1019	0.03626	0.60800	0.00837	0.367	6.880	0.0682
15	0.631	0.0969	0.03749	00000	0.01436	0.367	6.880	0.0879
16	1.143	0.1019	0.03626	0.59800	0.0136	0.367	6,880	0.0819
17	0.620	0.0982	0.03716		0.01210	0.367	0.880	0.0869
18	1.143	0.1019	0.03626	0.59000	0.01198	0.367	6.880	0.0911
9 4	0.681	0.0989	0.03698		0.01354	0.367	6.880	0.0060
0 :	1.143	0.1019	0.03626	0.58400	0.01186	0.367	6.880	0.0954
= 9	0.716	0.0993	0.03690		0.01400	0.367	6.880	0.1000
2 2	1.143	0.1019	0.03626	0.58100	0.01184	0.367	6.880	0.0850
2 =	0.732	0.0094	0.03686		0.01419	0.367	6.880	0.1013
· va	143	0.1019	0.03626	0.58100	0.01184	0.367	6.880	0.0850
90	1.143	0.1019	0.03626	0.58100	0.01184	0,367	6.860	0.0850
7	1.143	0.1019	0.03626	0.58500	0.01190	0.367	6.880	0.0855
8	1.143	0.1019	0.03626	0.59000	0.01198	0.367	6.880	0.0860
O.			4)N	0.0000	0.01207	0.367	6.880	0.0867
0	1.143	0.1019	2010	000000		0.416	NA	1.2907
=			SACCO.CO	0.00200.0	0.01216	0.367	6.880	0.0873
2			A.N.			0.465	N/A	1.1524
. 6	1 104	0 4040	7971			0.465	N/A	0.8892
4	908.0	04004	0.03629	0.55000	0.01199	0.465	7.540	0.0944
	900.0	0000	0.03670	0.44800	0.00968	0.465	7.540	0.0770
	2002	0.0304	0.03928	0.20300	0.00498	0.465	7.540	0.0419
	6.03	0.1040	0.03578	1.10100	0.01745	0.465	7.540	0.1355
	0.290	0.0804	0.03928	0.09300	0.00231	0.465	7.540	0.0218
	1.496	0.1030	0.03600	0.82200	0.01501	0.465	7 540	0.4474
	0.808	0.1001	0.03670	0.36000	0.00798	0.465	7.540	0.0642
_	1.184	0.1021	0.03622	0.65100	0.01288	0.465	7 540	2000

	0.0890	0.0806	0.0881	0.0813	0.0874	0.0820	0.0869	0.0825	0.0866	0.0830	0.0862	0.0830	0.0860	0.000	0.0859	0.0828	0.0856	0.0820	0.0855	0.0810	0.0854	0.0799	0.0852	0.0784	0.0850	0.000	0.040	0.0040	0.0847	0.0728	0.0847	0.0714	0.0907	0.1240	0.0728	0.0921	0.0386	0.1496	0.0251	0.1265	0.0687	0.1004	0.0890	0.0875	0.0833	0.0874	0.0833	0.0033	0.0873	0.0831	0.0871	0.0830	0.0870
;	099'9	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	7.540	7.540	7.540	7.540	7.540	7.540	7.540	7.540	7.540	7.540	7.540	6.880	6.880	6.880	6.880	6 880	6.880	6.880	0.000	088.9	0.880
2000	0.307	196.0	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.387	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.465	0.465	0.465	0.465	0.465	0.465	0.465	0.465	0.465	0.465	0.465	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	100.0
90000	00000	00000	0.01228	62110.0	0.01218	0.01139	0.0210	0.01147	0.01206	0.01153	0.01201	0.01163	0.01198	0.01153	0.01198	0.01148	0.01192	0.01139	0.01190	0.01126	0.01188	0.01109	0.01185	0.01087	0.01184	0.01063	0.01182	0.01034	0.01179	0.01005	0.01179	0.00800	0.01150	0.01591	0.00911	0.01167	0.00455	0.01932	0.00275	0.0000		0.012/9	0.01127	0.01220	0.01158	0.01218	0.01158	0.01216	0.01155	0.01213	0.01153	0.01212	
0.61800	0.54100	0.81000	0.54700	0 60300	0.66300	0 60800	0.03800	0.00000	000800	0.56200	0.59200	0.56200	0.59000	0.56200	0.58900	0.55900	0.58600	0.55300	0.56500	0.54500	0.58400	0.53500	0.58200	0.52200	0.58100	0.50800	0.58000	0.49100	0.57800	0.47500	0.57800	0.46100	0.55900		0.41800	0.40500	1 40000	0.44400	00500	0.39000		0.54500	00000	0.66500	0.5650	0.60300	0.56500	0.60200	0.56300	0.60000	0.56200	0.59900	
0.03626	0.03626	0.03826	0.03628	0.03628	0.03826	0.03626	0.03628	0.03628	0.0000	0.03626	0.03626	0.03628	0.03626	0.03626	0.03626	979670	0.03626	929000	0.03636	92950.0	0.05000	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03628	0.03626	0.03628	0.03626	0.03629	0.03657	0.03670	0.03028	0.03560	0.03928	0.03584	0.03670	0.03618	0.03629	0.03626	0.03626	0.03020	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	
0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0 1010	0.1010	0.1019	0.1019	0.1019	0.1019	0 1010	0.1019	0.1010	0.1019	0 1010	0.1010	0.1019	0 1010	0.1010	0.1010	0.00	0.101.0	0.010	0.1010	0.1010	0.00	0.1010	0.1016	0.1001	0.0973	0.0904	0.1048	0.0904	0.1037	0.1001	0.1022	0.1018	0.1019	0.1019	0.1019	0.1010	0.1010	0.1019	0.1019	0.1019	0.1019	0.1019	
1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1143	1143	1 143	1 143	1143	1.143	1143	1.143	1.143	1.143	1,143	1.143	1.143	1,143	1.143	1143	116	1143	1.143	1.143	1.143	1 143	101	0.868	0.808	0.550	0.296	2.931	0.296	1.850	0.808	1.225	1.104	1.143	1.143	1,143	1.143	1.143	1 143	5.14	1.143	54.5	1.143	
K42	2	X	K45	K48	K47	K48	K49	99 90 90	K51	K52	K53	¥8.	K55	K58	K57	K58	K59	K60	K61	K62	K63	K64	K65	89X	K67	K68	69X	K70	ξ.	K72	K73	¥24	K75	K76	K7	K78	K79	K80	K81	K82	K83	K84	K85	K86	K87	K88	K89	06X	Kor	K02	Koa	200	

	0.0828	0.0869	0.0826	0.0867	0.0825	0.0866	0.0824	0.0864	0.0821	0.0863	0.0820	0.0862	0.0817	0.0860	0.0814	0.0859	0.0810	0.0857	0.0805	0.0856	0.0797	1.0819	0.0855	0.0788	0.992	0.890	0.0935	0.0874	1.717	0.815	0.0933	0.1031	2.100	0.542	0.0931	0.1254	1.251	0.655	0.0992	0.1720	1.200	0.0989	0.1712	0.0902	0.1567	0.0712	0.1378	0.0325	0.0672	0.0314	0.0703	0.0895
	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	N/A	6.880	6.880	N/A	N/A	7.540	7.540	V/N	NA	7.540	7.540	N/A	N/A	7.540	7.540	N/A	V/A	8.040	8.040	Y S	8.040	8.040	7.540	7.540	7.540	7.540	7.540	7.540	7.540	7.540	7.540
	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	9610	0.367	0.367	0.541	0.518	0.541	0.541	0.312	0.427	0.312	0.312	0.255	0.284	0.255	0.255	0.429	0.343	0.429	0.429	0.447	874.0	0.429	0.405	0.465	0.465	0.465	0.465	0.465	0.465	0.465	0.465
	26110.0	0.01210	0.01148	0.01207	0.01147	0.01206	0.01145	0.01204	0.01140	0.01202	0.01139	0.01201	0.01135	0.01198	0.01130	0.01196	0.01126	0.01193	0.01117	0.01192	0.01106		0.01190	0.01092			0.01187	0.01106			0.01184	0.01314			0.01182	0.01610			0.01181	0.02000	0.04476	0.01176	0.02077	0.00143	0.02025	0.00890	0.01775	0.00373	0.00834	0.00358	0.00879	0.01133
	OUTOC.U	0.59800	0.55900	0.59600	0.55800	0.59500	0.55700	0.59400	0.55400	0.59300	0.55300		0.55100	0.59000	0.54800	0.58900	0.54500	0.58700	0.54000	0.58600	0.53300		0.58500	0.52500			0.58300	0.53400			0.58100	0.67400			0.58000	0.93600			0.57600		0.67600	20010	0.66600	00000		0.40700		0.15100		0.14500	0.40100	0.54900
903600	0.03020	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	N/A	0.03626	0.03626	N/A	1.260	0.03626	0.03622	NA	1.260	0.03626	0.03600	N/A	1.260	0.03626	0.03578	N/A	097.1	0.03626	200000	0.03626	0.03567	0.03620	0.03595	0.03363	0.036/0	0.03628	0.03928	0.03857	0.03928	0.03670	0.03629
04040	0.1010	0.1019	9101.0	8.01.0 0.00	0.1019	0.1010	9101.0	0.1019	WIOT.O	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019		0.1019	0.1019			0.1019	0.1021			0.1019	0.1030			0.1019	0.1040		0,000	0.1019		0.1019	0.10444	0.1018	0 10368	0.10300	0.1001	29101.0	0.0904	0.09288	0.0904	0.1001	0.1018
1 143	1449	255	3.1.4	2 5 5	2 5	5 5	2 5	34.5	2 :	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143		1.143	1.143			1.143	. 1:184			1.143	1.496		:	1.143	2.03/		****	2 907		1.143	2.482	1.104	1 840	8080	0.00	B11.1	0.296	0.359	9670	0.808	1.104
26	KOS	903	26.7	80%	8 8	K100	200	K103	7402	2012	K104	K105	K106	K107	K108	X100	K110	K11	K112	K113	K114	K115	K116	K117	K118	K119	K120	K121	K122	K123	K124	K125	K126	K12/	K128	K128	K131	K132	K133	K134	K135	K136	K137	K138	K130	K440	27.7	7141	N142	3143	K144	K145

				00200	0.04464	0.420	9 040	0 0977
K146	1.143	0.1010	0.03626	0.36700	0.01157	0.429	8,040	0.0973
K147	1.143	0.1019	0.03628	0.9760	0.01647	0.255	7.540	0.1242
K148	2.037	0.1040	0.03676	0.56300	0.01155	0.255	7.540	0.0911
K149	3.	8101.0	0.03620	0.21900	0.01375	0.312	7.540	0.1077
K150	1.450	0.1030	0.03626	0.56200	0.01153	0.312	7.540	0.0870
reta	2 3	0.001	0.03622	0.58200	0.01184	0.541	7.540	0.0933
K152	1.104	0.1021	0.03626	0.56000	0.01150	0.541	7.540	0.0907
3 5 5	2 5	0.1019	0.03626	0.57300	0.01171	0.367	6.880	0.0842
7154 7456	3 5 5	0.1019	0.03626	0.55800	0.01147	0.367	6.880	0.0825
K158	3 5	0.1019	0.03626	0.57900	0.01181	0.367	6.880	0.0848
K157	1.143	0.1019	0.03626	0.55700	0.01145	0.367	6.880	0.0824
K158	1.16	0.1019	0.03626	0.58200	0.01185	0.367	6.880	0.0852
K150	1.143	0.1019	0.03626	0.55600	0.01144	0.367	6.880	0.0823
K160	1.143	0.1019	0.03626	0.58500	0.01190	0.367	6.860	0.0825
K161	1.143	0.1019	0.03626	0.55400	0.01140	0.367	0.000	0.0021
K162	1.143	0.1019	0.03626	0.58500	0.01190	0.367	0.880	0.0830
K163	1.143	0.1019	0.03626	0.55300	0.01139	0.367	0.880	0.0820
K164	1.143	0.1019	0.03626	0.58500	0.01190	0.367	0.880	0.0000
K165	1.143	0.1019	0.03626	0.55100	0.01135	0.367	0.000	0.0017
K166	1.143	0.1010	0.03626	0.58500	0.01190	0.367	6.880	0.0855
K167	1.143	0.1019	0.03628	0.55000	0.01134	0.367	6.880	0.0816
K168	1.143	0.1019	0.03626	0.58400	0.01188	0.367	6.880	0.0654
K169	1.143	0.1019	0.03626	0.54900	0.01132	0.367	6.880	0.0815
K170	1.143	0.1019	0.03626	0.58400	0.01188	0.367	6.880	0.0854
K171	1.143	0.1019	0.03626	0.54800	0.01130	0.367	6.880	0.0814
K172	4 143	0.1019	0.03626	0.58300	0.01187	0.367	6.880	0.0853
K173	116	0.1019	0.03626	0.54700	0.01129	0.367	6.880	0.0813
K174	1.143	0.1019	0.03626	0.58200	0.01185	0.367	6.880	0.0852
K475	1143	0.1019	0.03626	0.54500	0.01126	0.367	6.880	0.0810
K478	1143	0.1019	0.03626	0.58100	0.01184	0.367	6.880	0.0850
K477	1143	0.1019	0.03626	0.54400	0.01124	0.367	6.880	0.0809
K178	1.143	0.1019	0.03626	0.58000	0.01182	0.367	6.880	0.0849
K479	1 143	0.1019	0.03626	0.54300	0.01122	0.367	6.880	0.0808
X180	541	0.1019	0.03626	0.57700	0.01177	0.367	6.880	0.0846
K181	1.143	0.1019	0.03626	0.54100	0.01119	0.367	6.880	0.0806
K182	1.143	0.1019	0.03626	0.57600	0.01176	0.367	6.880	0.0845
K183	1.143	0.1019	0.03626	0.54000	0.01117	0.367	0.880	0.0003
K184	1.143	0.1019	0.03626	0.57500	0.01174	0.36/	00.00	0.0804
K185	1.143	0.1019	0.03626		0.01116	0.307	7 540	00000
K186	1.104	0.1018	0.03629	0.55300	0.01140	0.465	25.5	0.0030
K187	1.225	0.1022	0.03618	0.58000	0.01160	0.465	2540	0.0694
K188	0.808	0.1001	0.03670	0.0000	0.0000	0.465	7 540	0 1229
K189	1.850	0.1037	0.03584	0.68800	0.000	0.465	7.540	0.0260
K190	0.296	0.0904	0.03826	4 44400	0.00200	0.485	7.540	0.1485
K191	2.931	0.1048	0.03560	0.48000	0.00443	0.465	7.540	0 0377
K192	0.296	0.0904	07850.0	0.1900	0.0000	0.465	7.540	0.0721
K183	908.0	1001.0	0.03670	0.41300	0.0000	0.465	7.540	0.0897
K194	1.104	0.1018	0.03629	0.50100	0.01130	0.367	6.880	0.0763
K195	1.143	0.1019	0.03026	0.50500	0.01463	0.367	6.880	0.0836
K196	1.143	0.1010	0.03626	0.56800	0.01163	0.367	6.880	0.0778
K197	1.143	0.1019	0.03626	0.51700	0.01078	2000	200	,

0.0836	0.000	0.0834	0.0809	0.0831	0.0824	0.0830	0.0836	0.0828	0.0845	0.0827	0.0850	0.0826	0.0854	0.0826	0.0854	0.0825	0.0853	0.0825	0.0849	0.0825	0.0843	0.0825	0.0835	0.0828	0.0825	0.0832	0.0816	0.0838	0.0861	9560.0	0.0650	0.1133	0.0220	0.1333	0.0417	0.0763	0.0936	0.0863	0.0655	0.0837	0.0831	0.0827	0.0826	0.0826	0.0830	0.0835	0.0844	0.0856	0.0870	0.0884
6 880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.860	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	7.540	7.540	7.540	7.540	7.540	7.540	7.540	7.540	7.540	0.880	6.880	6 880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880	6.880
798.0	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	796.0	0.367	0.367	0.367	0.367	0.465	0.465	0.465	0.465	0.465	0.465	0.465	0.465	0.485	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367
0.01161	0.01102	0.01160	0.01124	0.01155	0.01145	0.01153	0.01163	. 0.01152	0.01176	0.01150	0.01184	0.01148	0.01188	0.01148	0.01188	0.01147	0.01187	0.01147	0.01182	0.01147	0.01173	0.01147	0.01161	0.01152	0.01147	0.01157	0.01134	0.01166	0.01088	0.01215	0.00608	0.01449	0.00234	0.01716	0.00495	0.00958	0.01180	0.01202	0.01176		0.01165	0.01150	0.01148	0.01148	0.01153	0.01161	0.01174	0.01192	0.01212	0.01232
0.56700	0.53100	0.56600	0.54400	0.56300	0.55700	0.56200	0.56800	0.56100	0.57600	0.56000	0.58100	0.55900	0.58400	0.55900	0.58400	0.55800	0.58300	0.55800	0.58000	0.55800	0.57400	0.55800	0.56700	0.56100	0.55800	0.56400	0.55000	0.57000	0.52200	0.60200	0.36500	0.77800	0.09400	1.06100	0.20200	0.44300	0.58200	0.58500			0.56300	0.56000	0.55900	0.55900	0.56200	0.56700	0.57500	0.58600	0.59900	0.61200
0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03629	0.03622	0.03670	0.03600	0.03928	0.03578	0.03928	0.03670	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626
0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1018	0.1021	0.1001	0.1030	0.0904	0.1040	0.0504	0.1001	0.1010	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019	0.1019
1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	n.143	1.143	1.143	1.143	1.143	1.104	1.184	0.808	3.4.5	0.296	2.037	9870	1 104	1 143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143
K198	K199	K200	K201	K202	K203	K204	K205	K206	K207	K208	K200	K210	K211	K212	K213	K214	K215	276	K217	K218	K219	K220	K221	K222	K223	K224	K225	K228	/22/	K228	222	223	523	7537	5557	K235	K236	K237	K238	K239	K240	K241	K242	K243	K244	K245	K246	K247	K248	K249

0.0898	0.0911	173.8900
6.880	6.880	A/N
0.367	0.367	Ϋ́
0.01253	0.01272	N/A
0.62600	0.63900	A/A
0.03626	0.03626	N/A
0.1019	0.1019	N/A
1.143	1.143	N/A

K250 K251 K252

BRANCH	NODE	TON	TAG	I, C, S	BRANCH		TON	TAG	I, C, S,
1	1	2	1	K1	51	16	17	1	S9
2		145	4	K2	52		160	4	S10
3	2	3	1	S1	53		301	1	K25
4		146	4	S2	54		301	1	S38
5	3	4	1	S1	55	17	18	1	S9
6		147	4	S2	56		161	4	S10
7	4	5	1	K3	57		301	1	K26
8		148	4	S2	58		301	1	S34
9	5	6	1	K4	59	18	19	1	S9
10		149	4	K5	60		162	4	S10
11		301	1	K6	61		301	1	K27
12	6	7	1	S9	62		301	1	S30
13		150	4	S10	63	19	20	1	S9
14		301	1	K7	64		163	4	S10
15	7	8	1	S9	65		301	1	K28
16	·	151	4	S10	66		301	1	S26
17	-	301	1	K8	67	20	21	1	K29
18		301	1	K9	68		164	4	S10
19	8	9	1	S9	69		301	1	K30
20		152	4	S10	70		301	1	S22
21		301	1	K10	71	21	22	1	K31
22		301	1	K11	72	21	165	4.	K32
23	9	10	1	S9	73		301	1	K33
	9	153	4	S10	74	22	23	1.	S71
24			1	K12	75	22	166	- 4	S72
25		301	1	K13				1	K34
26	40	301			76 77	22	301 24		S71
27	10	11	1	S9		23		1	S72
28	ļ	154	4	S10	78		167	4	K35
29		301	1	K14 K15	79	24	301 25	1	S71
30	44	301	1		80	24			S71
31	11	12	4	S9	81		168	4	K36
32		155		S10	82		301	1	
33	ļ	301	1	K16	83	25	301	1	K37
34	40	301	1	K17	84	25	26	1 1	S71
35	12	13	1	S9	85		169	4	S72
36		156	4	S10	86		301	1	K38
37		301	1	K18	87	200	301	1	K39
38	40	301	1	K19	88	26	27	1	S67
39	13	14	1	S9	89	-	170	4	S72
40	-	157	4	S10	90	 	301	1	K40
41	-	301	1	K20	91	07	301	1 1	K41
42	1	301	1	K21	92	27	28	1	S9
43	14	15	1	S9	93		171	4	S10
44		158	4	S10	94		301	1	K42
45		301	1	K22	95		301	1	K43
46		301	1 1	K23	96	28	29	1	S9
47	15	16	1	S9	97		172	4	S10
48		159	4	S10	98		301	1	K44
49		301	1	K24	99		301	1	K45
50	1	301	1	S42	100	29	30	1	S9

BRANCH	NODE	TON	TAG	I, C, S	BRANCH	NODE	TON	TAG	I, C, S,
101		173	4	S10	151		301	1	K71
102		301	1	K46	152	42	43	1	S67
103		301	1	K47	153		186	4	S10
104	30	31	1	S9	154		301	1	K72
105		174	4	S10	155		301	1	K73
106		301	1	K48	156	43	44	1	S71
107		301	1	K49	157		187	4	S72
108	31	32	1	S9	158		301	1	K74
109	<u> </u>	175	4	S10	159		301	1	K75
110		301	1	K50	160	44	45	1	S71
111		301	1	K51	161		188	4	S72
112	32	33	1	S9	162		301	1	K76
113	- 02	176	4	S10	163		301	1	K77
114		301	1	K52	164	45	46	1	S71
115		301	1	K53	165		189	4	S72
116	33	34	1	S9	166		301	1	K78
117	- 55	177	4	S10	167	46	47	1	S71
		301	1	K54	168	70	190	4	S72
118 119		301	1	K55	169		301	1	K79
	24	35	1	S9	170		301	1	K80
120	34	178	4	S10	171	47	48	1	S71
121			1	K56	172	41	191	4	S72
122		301	1	K57	173		301	1	K81
123	25	301		S9	174		301	1	K82
124	35	36	1		175	48	49	1	S67
125		179	4	S10 K58	176	40	192	4	S72
126		301	1	K59	177		301	1	K83
127		301	1		178		301	1	K84
128	36	37	1	S9	179	49	50	1	S9
129		180	4	S10		49	193	4	S10
130		301	1	K60	180 181		301	1	K85
131	<u> </u>	301	1	K61				1	K86
132	37	38	1	S9	182	50	301 51	1	S9
133		181	4	S10	183 184	50	194	4	S10
134		301	1	K62			301	1	K87
135	- 00	301	1	K63	185 186		301	1	K88
136	38	39	1_1_	S9	187	51	52	1	S9
137		182	4	S10		31	195	4	S10
138		301	1	K64	188		301	1	K89
139	000	301	1	K65	189	-		1	K90
140	39	40	1	S9	190	52	301 53	1	S9
141		183	4	S10	191	52	196	4	S10
142	1	301	1_1_	K66	192			1	
143		301	1	K67	193		301	1	K91 K92
144	40	41	1	S9	194	52	301	1	S9
145		184	4	S10	195	53	54		S10
146		301	1	K68	196		197	4	
147		301	1	K69_	197		301	1	K93
148	41	42	1	S9	198	E4	301	1 1	K94
149		185	4	S10	199	54	55	1	S9
150		301	1	K70	200		198	4	S10

BRANCH	NODE	TON	TAG	I, C, S	BRANCH	NODE	TON	TAG	I, C, S
201		301	1	K95	251	67	68	1	K126
202		301	1	K96	252		211	4	K127
203	55	56	1	S9	253		301	1	K128
204		199	4	S10	254		301	1	K129
205		301	1	K97	255	68	69	1	K130
206		301	1	K98	256		212	4	K131
207	56	57	1	S9	257		301	1	K132
208		200	4	S10	258		301	1	K133
209		301	1	K99	259	69	70	1	K134
210		301	1	K100	260		213	4	S256
211	57	58	1	S9	261		301	1	K135
212		201	4	S10	262	-	301	1	K136
213		301	1	K101	263	70	71	1	S71
214		301	1	K102	264		214	4	S72
215	58	59	1	S9	265		301	1	K137
216		202	4	S10	266		301	1	K138
217		301	1	K103	267	71	72	1	S71
218		301	1	K104	268		215	4	S72
219	59	60	1	S9	269		301	1	K139
220		203	4	S10	270		301	1	K140
221		301	1	K105	271	72	73	1	S71
222		301	1	K106	272		216	4.	S72
223	60	61	1	S9	273		301	1	K141
224		204	4	S10	274		301	1	K142
225		301	1	K107	275	73	74	1	S71
226		301	1	K108	276		217	4	S72
227	61	62	1	S9	277		301	1	S274
228		205	4	S10	278		301	1	K143
229		301	1	K109	279	74	75	1	S71
230		301	1	K110	280		218	4	S72
231	62	63	1	S9	281		301	1	S270
232		206	4	S10	282		301	1	K144
233		301	1	K111	283	75	76	1	S259
234		301	1	K112	284		219	4	S72
235	63	64	1	S9	285		301	1	S266
236		207	4	S10	286		301	1	K145
237		301	1	K113	287	76	77	1	S255
238		301	1	K114	288		220	4	S256
239	64	65	1	K115	289		301	1	S262
240		208	4	S10	290		301	1	K146
241		301	1	K116	291	77	78	1	S251
242		301	1	K117	292		221	4	S256
243	65	66	1	K118	293		301	1	S258
244		209	4	K119	294		301	1	K147
245		301	1	K120	295	78	79	1	S247
246		301	1	K121	296		222	4	S252
247	66	67	1	K122	297		301	1	K148
248		210	4	K123	298		301	1	K149
249		301	1	K124	299	79	80	1	S243
250		301	1	K125	300		223	4	S248

BRANCH	NODE	TON	TAG	I, C. S	BRANCH	NODE	TON	TAG	I. C. S
301		301	1	K150	352		236	4	S10
302		301	1	K151	353		301	1	K176
303	80	81	1	S239	354		301	1	K177
304		224	4	S244	355	93	94	1	S9
305		301	1	K152	356		237	4	S10
306		301	1	K153	357		301	1	K178
307	81	82	1	S9	358	<u> </u>	301	1	K179
308		225	4	S10	359	94	95	1	S9
309		301	1	K154	360		238	4	S10
310		301	1	K155	361		301	1	K180
311	82	83	1	S9	362		301	1	K181
312	02	226	4	S10	363	95	96	1	\$9
313		301	1	K156	364	- 55	239	4	S10
314		301	1	K157	365		301	1	K182
315	83	84	1	S9	366		301	1	K183
316	00	227	4	S10	367	96	97	1	S67
317		301	1	K158	368	30	240	4	S10
318		301	1	K159	369		301	1	K184
319	84	85	1	S9	370		301	1	
320	04	228	4	S10		07			K185
			1		371	97	98	1	S71
321		301		K160	372		241	4	S72
322	0.5	301	1	K161	373		301	1,	K186
323	85	86	1	S9	374		301	1	K187
324		229	4	S10	375	98	99	1	S71
325		301	1	K162	376		242	A	S72
326		301	1	K163	377		301	1	K188
327	86	87	1	S9	378		301	1	K189
328		230	4	S10	379	99	100	1	S71
329		301	1	K164	380		243	4	S72
330		301	1	K165	381		301	1	K190
331	87	88	1	S9	382	100	301	1	K191
332	•	231	4	S10	383	100	101	1	S71
333		301	1	K166	384		244	4	S72
334		301	1	K167	385	46:	301	1	K192
335	88	89	1	S9	386	101	102	1	S71
336		232	4	S10	387		245	4	S72
337		301	1	K168	388		301	1	S163
338		301	1	K169	389		301	1	K193
339	89	90	1	S9	390	102	103	1	S67
340		233	4	S10	391		246	4	S72
341		301	1	K170	392		301	1	S159
342		301	1	K171	393		301	1	K194
343	90	91	1	S9	394	103	104	1	S9
344		234	4	S10	395		247	4	S10
345		301	1	K172	396		301	1	K195
346		301	1	K173	397		301	1	K196
347	91	92	1	S9	398	104	105	1	S9
348		235	4	S10	399		248	4	\$10
349		301	1	K174	400		301	1	K197
350		301	1	K175	401		301	1	K198
351	92	93	1	S9	402	105	106	1	S9

BRANCH	NODE	TON	TAG	I, C, S	BRANCH	NODE	TON	TAG	I, C, S
403		249	4	S10	453		301	1	K224
404		301	1	K199	454	118	119	1	S67
405		301	1	K200	455		262	4	S10
406	106	107	1	S9	456		301	1	K225
407		250	4	S10	457		301	1	K226
408		301	1	K201	458	119	120	1	S71
409		301	1	K202	459		263	4	S72
410	107	108	1	S9	460		301	1	K227
411	107	251	4	S10	461		301	1	K228
412		301	1	K203	462	120	121	1	S71
413		301	1	K204	463	120	264	4	S72
414	108	109	1	S9	464		301	1	K229
415	100	252	4	S10	465		301	1	K230
416		301	1	K205	466	121	122	1	S71
417		301	1	K206	467	121	265	4	S72
418	109	110	1	S9	468		301	1	K231
419	109	253	4	S10	469		301	1	K232
420		301	1	K207	470	122	123	1	S71
421		301	1	K207	471	122	266	4	S72
422	110		1	S9	472		301	1	K233
	110	111 254	4	S10	473	123	124	1	S71
423			1	K209	474	123	267	4.	S72
424	-	301		K210	474		301	1	K234
425	444	301	1			404		-	S67
426	111	112	1	S9	476	124	125	1 .	
427		255	4	S10	477		268	4	S72 K235
428		301	1	K211	478	405	301	1	
429		301	1	K212	479	125	126	1	S9
430	112	113	1	S9	480		269	4	S10
431		256	4	S10	481		301	1	S22
432		301	1	K213	482	400	301	1 1	K236 S9
433	110	/ 301	1	K214	483	126	127	1	
434	113	114	1	S9	484		270	4	S10
435		257	4	S10	485		301	1	S26
436	ļ	301	1	K215	486	407	301	1	K237 S9
437	111	301	1	K216	487	127	128	1	
438	114	115	1	S9	488		271	4	S10
439		258	4	S10	489		301	1	S30
440		301	1	K217	490	400	301	1 1	K238
441	115	301	1	K218	491	128	129	1	S9
442	115	116	1	S9	492		272	4	S10
443	ļ	259	4	S10	493		301	1	S34
444		301	1	K219	494	400	301	1 1	K239
445		301	1	K220	495	129	130	1	S9
446	116	117	1	S9	496		273	4	S10
447		260	4	S10	497		301	1	S38
448		301	1	K221	498	16.5	301	1	K240
449		301	1	K222	499	130	131	1 1	S9
450	117	118	1	S9	500		274	4	S10
451		261	4	S10	501		301	1	S42
452		301	1	K223	502		301	1	K241

BRANCH	NODE	TON	TAG	I, C, S	BRANCH	NODE	TON	TAG	I, C, S
503	131	132	1	S9	553				
504		275	4	S10	554				
505		301	1	S46	555				
506		301	1	K242	556				
507	132	133	1	S9	557				
508		276	4	S10	558				
509		301	1	S42	559				
510		301	1	K243	560				
511	133	134	1	S9	561				
512		277	4	S10	562				
513		301	1	S38	563				
514		301	1	K244	564				
515	134	135	1	S9	565				
516		278	4	S10	566				
517		301	1	S34	567				
518		301	1	K245	568				
519	135	136	1	S9	569				
520		279	4	S10	570				
521		301	1	S30	571				
522		301	1	K246	572				
523	136	137	1	S9	573				
524		280	4	S10	574			••	
525		301	1	S26	575				
526		301	1	K247	576				
527	137	138	1	S9	577			•	
528		281	4	S10	578				
529		301	1	S22	579				
530		301	1	K248	580				
531	138	139	1	S9	581				
532		282	4	S10	582				
533		301	1	S18	583				
534		301	1	K249	584				
535	139	140	1	S9	585				
536		283	4	S10	586				
537		301	1	K250	587				
538	140	141	1	S7	588				
539		284	4	S10	589				
540		301	1	K251	590				
541	141	142	1	S1	591				
542		285	4	S2	592				
543	142	143	1	S1	593				
544		286	4	S2	594				
545	143	144	1	S1	595				
546		287	4	S2	596				
547	144	288	4	S2	597				
548					598				
549					599				
550					600				
551					601				
552					602				

BRANCH	NODE	TON	TAG	I, C, S	BRANCH	NODE	TON	TAG	I. C. S.
701	145	302	5	k252	751	195	194	5	S701
702	146	145	5	S701	752	196	195	5	S701
703	147	146	5	S701	753	197	196	5	S701
704	148	147	5	S701	754	198	197	5	S701
705	149	148	5	S701	755	199	198	5	S701
706	150	149	5	S701	756	200	199	5	S701
707	151	150	5	S701	757	201	200	5	S701
708	152	151	5	S701	758	202	201	5	S701
709	153	152	5	S701	759	203	202	5	S701
710	154	153	5	S701	760	204	203	5	S701
711	155	154	5	S701	761	205	204	5	S701
712	156	155	5	S701	762	206	205	5	S701
713	157	156	5	S701	763	207	206	5	S701
714	158	157	5	S701	764	208	207	5	S701
715	159	158	5	S701	765	209	208	5	S701
716	160	159	5	S701	766	210	209	5	S701
717	161	160	5	S701	767	211	210	5	S701
718	162	161	5	S701	768	212	211	5	S701
719	163	162	5	S701	769	213	212	5	S701
720	164	163	5	S701	770	214	213	5	S701
721	165	164	5	S701	771	215	214	5	S701
722	166	165	5	S701	772	216	215	5,	S701
723	167	166	5	S701	773	217	216	5	S701
724	168	167	5	S701	774	218	217	5	S701
725	169	168	5	S701	775	219	218	<i>-</i> 5	S701
726	170	169	5	S701	776	220	219	5	S701
727	171	170	5	S701	777	221	220	5	S701
728	172	171	5	S701	778	222	221	5	S701
729	173	172	5	S701	779	223	222	5	S701
730	174	173	5	S701	780	224	223	5	S701
731	175	174	5	S701	781	225	224	5	S701
732	176	175	5	S701	782	226	225	5	S701
733	177	176	5	S701	783	227	226	5	S701
734	178	177	5	S701	784	228	227	5	S701
735	179	178	5	S701	785	229	228	5	S701
736	180	179	5	S701	786	230	229	5	S701
737	181	180	5	S701	787	231	230	5	S701
738	182	181	5	S701	788	232	231	5	S701
739	183	182	5	S701	789	233	232	5	S701
740	184	183	5	S701	790	234	233	5	S701
741	185	184	5	S701	791	235	234	5	S701
742	186	185	5	S701	792	236	235	5	S701
743	187	186	5	S701	793	237	236	5	S701
744	188	187	5	S701	794	238	237	5	S701
745	189	188	5	S701	795	239	238	5	S701
746	190	189	5	S701	796	240	239	5	S701
747	191	190	5	S701	797	241	240	5	S701
748	192	191	5	S701	798	242	241	5	S701
749	193	192	5	S701	799	243	242	5	S701
, , , ,									

BRANCH	NODE	TON	TAG	I, C, S	BRANCH	NODE	TON	TAG	I, C, S,
801	245	244	5	S701	851				
802	246	245	5	\$701	852				
803	247	246	5	S701	853				
804	248	247	5	S701	854				
805	249	248	5	S701	855			<u> </u>	
806	250	249	5	S701	856			†	
807	251	250	5	S701	857				
808	252	251	5	S701	858				
809	253	252	5	S701	859				
810	254	253	5	S701	860				
811	255	254	5	S701	861			-	
	256	255	5	S701	862				
812		256	5	\$701	863			-	
813	257	257	5	S701	864				
814	258			S701	865			-	
815	259	258	5		866				
816	260	259	5 5	S701 S701	867				
817	261	260							
818	262	261	5	S701	868				
819	263	262	5	S701	869				
820	264	263	5	S701	870				
821	265	264	5	S701	871				
822	266	265	5	S701	872				
823	267	266	5	S701	873				
824	268	267	5	S701	874				
825	269	268	5	S701	875			-	
826	270	269	5	S701	876				
827	271	270	5	S701	877				
828	272	271	5	S701	878				
829	273	272	5	S701	879				
830	274	273	5	S701	880				
831	275	274	5	S701	881			1	
832	276	275	5	S701	882				
833	277	276	5	S701	883				
834	278	277	5	S701	884				
835	279	278	5	S701	885		-		
836	280	279	5	S701	886				
837	281	280	5	S701	887				
838	282	281	5	S701	888				
839	283	282	5	S701	889				
840	284	283	5	S701	890				
841	285	284	5	S701	891				
842	286	285	5	S701	892				
843	287	286	5	S701	893				
844	288	287	5	S701	894			ļ	
845					895		ļ		
846					896			ļ	
847					897				
848					898			ļ	
849					899				
850					900				

Brnh From To	Tag Conduct	Brnh	From To	Tag Conduct	Brnh	From To	Tag Conduct
1 1 2	1 .178E+01	57	17 301	1 .860E-01	113	32 176	4 .701E+001
2 1 145	4 .576E+00	58	17 301	1 .910E-01	114	32 301	1 .860E-01
3 2 3	1 .178E+01	59	18 19	1 .146E+01	115	32 301	1 .830E-01
4 2 146	4 .576E+00	60	18 162	4 .701E+00	116	33 34	1 .146E+01
5 3 4	1 .178E+01	61	18 301	1 .860E-01	117	33 177	
6 3 147	4 .576E+00	62	18 301	1 .820E-01	118	33 301	4 .701E+00 1 .860E-01
7 4 5	1 .160E+01	63	19 20	1 .146E+01	119	33 301	1 .830E-01
8 4 148	4 .576E+00	64	19 163	4 .701E+00	120	34 35	1 .146E+01
9 5 6	1 .146E+01	65	19 301	1 .870E-01	121	34 178	4 .701E+00
10 5 149	4 .701E+00	66	19 301	1 .680E-01	122	34 301	1 .860E-01
11 5 301	1 .954E-01	67	20 21	1 .129E+01	123	34 301	1 .830E-01
12 6 7	1 .146E+01	68	20 164	4 .701E+00	124	35 36	1 .146E+01
13 6 150	4 .701E+00	69	20 301	1 .870E-01	125	35 179	4 .701E+00
14 6 301	1 .940E-01	70	20 301	1 .490E-01	126	35 301	1 .860E-01
15 7 8	1 .146E+01	71	21 22	1 .115E+01	127	35 301	1 .820E-01
16 7 151	4 .701E+00	72	21 165	4 .889E+00	128	36 37	1 .146E+01
17 7 301	1 .920E-01	73	21 301	1 .940E-01	129	36 180	4 .701E+00
18 7 301	1 .240E-01	74	22 23	1 .115E+01	130	36 301	1 .860E-01
19 8 9	1 .146E+01	75	22 166	4 .889E+00	131	36 301	1 .810E-01
20 8 152	4 .701E+00	76	22 301	1 .770E-01	132	37 38	1 .146E+01
21 8 301	1 .910E-01	77	23 24	1 .115E+01	133	37 181	4 .701E+00
22 8 301	1 .490E-01	78	23 167	4 .889E+00	134	37 301	1 .850E-01
23 9 10	1 .146E+01	79	23 301	1 .420E-01	135	37 301	1 .800E-01
24 9 153	4 .701E+00	80	24 25	1 .115E+01	136	38 39	1 .146E+01
25 9 301	1 .890E-01	81	24 168	4 .889E+00	137	38 182	4 .701E+00
26 9 301	1 .680E-01	82	24 301	1 .136E+00	138	38 301	1 .850E-01
27 10 11	1 .146E+01	83	24 301	1 .220E-01	139	38 301	1 .780E-01
28 10 154	4 .701E+00	84	25 26	1 .115E+01	140	39 40	1 .146E+01
29 10 301	1 .880E-01	85	25 169	4 .889E+00	141	39 183	4 .701E+00
30 10 301	1 .820E-01	86	25 301	1 .117E+00	142	39 301	1 .850E-01
31 11 12	1 .146E+01	87	25 301	1 .640E-01	143	39 301	1 .770E-01
32 11 155 .	4 .701E+00	88	26 27	1 .129E+01	144	40 41	1 .146E+01
33 11 301	- 1	89	26 170	4 .889E+00	145	40 184	4 .701E+00
34 11 301	1 .910E-01	90	26 301	1 .101E+00	146	40 301	1 .850E-01
35 12 13	1 .146E+01	91	26 301	1 .850E-01	147	40 301	1 .750E-01
36 12 156	4 .701E+00	92	27 28	1 .146E+01	148	41 42	1 .146E+01
37 12 301	1 .860E-01	93	27 171	4 .701E+00	149	41 185	4 .701E+00
38 12 301	1 .970E-01	94	27 301	1 .890E-01	150	41 301	1 .850E-01
39 13 14	1 .146E+01	95	27 301	1 .810E-01	151	41 301	1 .730E-01
40 13 157	4 .701E+00	96	28 29	1 .146E+01	152	42 43	1 .129E+01
41 13 301	1 .850E-01	97	28 172	4 .701E+00	153	42 186	4 .701E+00
42 13 301	1 .100E+00	98	28 301	1 .880E-01	154	42 301	1 .850E-01
43 14 15	1 .146E+01	99	28 301	1 .810E-01	155	42 301	1 .710E-01
44 14 158	4 .701E+00	100	29 30	1 .146E+01	156	43 44	1 .115E+01
45 14 301 46 14 301	1 .850E~01	101	29 173	4 .701E+00	157	43 187	4 .889E+00
46 14 301 47 15 16	1 .101E+00	102	29 301	1 .870E-01	158	43 301	1 .910E-01
	1 .146E+01	103	29 301	1 .820E-01	159	43 301	1 .124E+00
48 15 159 49 15 301	4 .701E+00 1 .850E-01	104 105	30 31 30 174	1 .146E+01 4 .701E+00	160	44 45	1 .115E+01
50 15 301	1 .100E+00	106	30 1/4		161	44 188	4 .889E+00
51 16 17	1 .146E+01	107	30 301		162	44 301 44 301	1 .730E-01
52 16 160	4 .701E+00	108	31 32	1 .830E-01 1 .146E+01	163 164	44 301	1 .920E-01
53 16 301	1 .850E-01	109	31 175	4 .701E+00	165	45 46 45 189	1 .115E+01 4 .889E+00
54 16 301	1 .970E-01	110	31 301	1 .870E-01	166	45 189	1 .390E-01
55 17 18	1 .146E+01	111	31 301	1 .830E-01	167	45 301	1 .115E+01
56 17 161	4 .701E+00	112	32 - 33	1 .146E+01	168	46 190	4 .889E+00
						-0 -0	0071100

```
Brnh From To Tag Conduct
                                                            Brnh From To Tag Conduct
Brnh From To Tag Conduct
                1 .150E+00
                                   60 301
                                                                 74 301
                                                                            1 .138E+00
                              225
                                              1 .860E-01
                                                            281
169
     46 301
                                                                 74 301
                                   60 301
170
     46 301
                1 .250E-01
                              226
                                              1 .810E-01
                                                            282
                                                                            1 .700E-01
                1 .115E+01
171
                              227
                                   61
                                        62
                                              1 .146E+01
                                                            283
                                                                 75
                                                                      76
                                                                              .120E+01
     47
          48
                                      205
                                                                 75
                                                                    219
172
     47
         191
                  .889E+00
                              228
                                   61
                                              4
                                                .701E+00
                                                            284
                                                                            4 .889E+00
                4
                1 .127E+00
173
     47
                              229
                                   61 301
                                              1 .860E-01
                                                            285
                                                                 75
                                                                    301
                                                                            1 .157E+00
         301
                1 .690E-01
174
     47
                              230
                                   61 301
                                              1 .810E-01
                                                            286
                                                                 75 301
                                                                           1 .900E-01
         301
                                              1 .146E+01
                1 .129E+01
                                        63
                                                            287
                                                                 76
                                                                     77
                                                                           1 .125E+01
175
                              231
                                   62
     48
          49
                  .889E+00
                              232
                                   62
                                      206
                                              4
                                                .701E+00
                                                            288
                                                                 76 220
                                                                            4
                                                                             .655E+00
176
     48
         192
                4
                                      301
                                              1 .860E-01
                                                                 76 301
                                                                           1 .171E+00
        301
                              233
                                                            289
177
     48
                1 .100E+00
                                   62
                1 .890E-01
                              234
                                   62 301
                                              1 .810E-01
                                                            290
                                                                 76 301
                                                                           1 .980E-01
178
     48
        301
                                              1 .146E+01
                1 .146E+01
                                        64
                                                            291
                                                                 77
                                                                     78
                                                                           1 .210E+01
179
          50
                              235
                                   63
     49
                  .701E+00
                              236
                                   63
                                      207
                                                .701E+00
                                                            292
                                                                 77
                                                                    221
                                                                            4
                                                                             .655E+00
180
     49
         193
                                              1 .860E-01
                                      301
                                                            293
                                                                 77
                                                                     301
                                                                           1 .172E+00
                1 .880E-01
                              237
                                   63
181
     49
         301
                                                                           1 .970E-01
182
     49
         301
                1 .830E-01
                              238
                                   63 301
                                              1 .800E-01
                                                            294
                                                                 77
                                                                    301
                                              1 .108E+01
                1 .146E+01
                                        65
                                                            295
                                                                 78
                                                                     79
                                                                           1 .172E+01
                              239
                                   64
          51
183
     50
                                                                 78 222
184
     50
         194
                4
                  .701E+00
                              240
                                   64
                                      208
                                              4
                                                .701E+00
                                                            296
                                                                            4 .542E+00
                1 .870E-01
                              241
                                   64
                                      301
                                              1 .860E-01
                                                            297
                                                                 78
                                                                    301
                                                                           1 .124E+00
185
     50
         301
                                                                           1 .910E-01
                1 .830E-01
                                                                 78 301
186
     50 301
                              242
                                   64 301
                                              1 .790E-01
                                                            298
                1 .146E+01
                                   65
                                        66
                                              1 .992E+00
                                                            299
                                                                 79
                                                                     . 80
                                                                           1 .992E+00
                              243
187
     51
          52
                                                                 79 223
         195
                  .701E+00
                              244
                                   65
                                      209
                                                .990E+00
                                                            300
                                                                            4 .815E+00
188
     51
                                              4
                1 .870E-01
                              245
                                   65
                                      301
                                              1 .940E-01
                                                            301
                                                                 79
                                                                     301
                                                                            1 .108E+00
     51
189
        301
                                                                           1 .870E-01
                                              1 .870E-01
                                                                    301
                 .830E-01
                                                                 79
190
        301
                              246
                                   65
                                      301
                                                            302
     51
191
          53
                1 .146E+01
                              247
                                   66
                                        67
                                              1 .172E+01
                                                            303
                                                                 80
                                                                      81
                                                                           1 .108E+01
     52
                                      210
                                                                 80 224
                                                                            4 .990E+00
                                               .815E+00
                                                            304
192
     52
        196
                  .701E+00
                              248
                                   66
                                              4
                4
                1 .870E-01
                                              1 .930E-01
                                                            305
                                                                 80 301
                                                                           1 .930E-01
193
     52
         301
                              249
                                   66
                                      301
                                              1 .103E+00
                                                                           1 .910E-01
                                                            306
                                                                 80 301
194
     52 301
                1 .830E-01
                              250
                                   66 301
                1 .146E+01
                                              1 .210E+01
                                                            307
                                                                 81
                                                                     82
                                                                           1 .146E+01
195
     53
          54
                              251
                                   67
                                        68
                                   67
                                      211
                                              4 .542E+00
                                                            308
                                                                 81 225
                                                                            4 .701E+00
                              252
196
     53
        197
                  .701E+00
                4
                                              1 .930E-01
                                       301
                                                            309
                                                                 81 301
                                                                           1 .840E-01
197
     53
        301
                1 .870E-01
                              253
                                   67
                                              1 .125E+00
                                                            310
                                                                 81 301
                                                                           1 .830E-01
                              254
                                   67
                                      301
198
     53
        301
                1
                  .830E-01
                 .146E+01
                                              1 .125E+01
                                                            311
                                                                 82
                                                                     83
                                                                           1 .146E+01
199
     54
          55
                1
                              255
                                   68
                                        69
                                              4 .655E+00
                              256
                                      212
                                                            312
                                                                 82 226
                                                                            4 .701E+00
200
     54
         198
                4
                  .701E+00
                                   68
                 .870E-01
                              257
                                   68
                                      301
                                              1 .990E-01
                                                            313
                                                                 82 301
                                                                           1 .850E-01
201
     54
         301
                                              1 .172E+00
                                      301
                                                            314
                                                                 82
                                                                     301
                                                                              .820E-01
     54
                 .830E-01
                              258
                                   68
202
         301
                1
                                                                           1 .146E+01
                  .146E+01
                              259
                                   69
                                        70
                                              1 .120E+01
                                                            315
                                                                 83
                                                                     84
203
     55
          56
                                                                            4 .701E+00
                                                                 83 227
                                   69
                                      213
                                              4 .655E+00
                                                            316
204
     55
        199
                  .701E+00
                              260
                                                                           1 .850E-01
                                              1 .990E-01
                                                                 83 301
         301
                  .870E-01
                              261
                                   69 301
                                                            317
205
     55
                  .830E-01
                                                                            1 .820E-01
                                   69
                                      301
                                              1
                                               .171E+00
                                                            318
                                                                 83
                                                                     301
206
     55
        301
                1
                              262
                                                                            1 .146E+01
                                              1 .115E+01
                                                            319
                                                                 84
                                                                     85
          57
                  .146E+01
                              263
                                   70
                                        71
207
     56
                1
                                               .889E+00
                  .701E+00
                              264
                                   70 214
                                                            320
                                                                 84 228
                                                                            4 .701E+00
         200
208
     56
                4
                                              1 .900E-01
                                                                     301
                                                                            1 .860E-01
                                   70 301
                                                            321
                                                                 84
209
         301
                1
                  .870E-01
                              265
     56
                                    70 301
                                                .157E+00
                                                            322
                                                                 84
                                                                     301
                                                                            1
                                                                              .820E-01
         301
                  .820E-01
                              266
                                              1
210
     56
                1
                                              1 .115E+01
                                                            323
                                                                 85
                                                                      86
                                                                            1 .146E+01
211
     57
          58
                1
                  .146E+01
                              267
                                   71
                                        72
                                                                            4 .701E+00
                                                                     229
                  .701E+00
                                   71 215
                                              4 .889E+00
                                                            324
                                                                 85
212
     57
         201
                              268
                                                                 85
                                                                     301
                                                                            1 .860E-01
                1 .860E-01
                              269
                                   71 301
                                              1
                                               .710E-01
                                                            325
213
     57
         301
                                                                            1 .820E-01
                                    71 301
                                              1 .138E+00
                                                            326
                                                                 85
                                                                     301
214
     57
         301
                1
                  .820E-01
                              270
                1 .146E+01
                                        73
                                               .115E+01
                                                            327
                                                                 86
                                                                      87
                                                                            1 .146E+01
                              271
                                    72
          59
215
     58
                                              4 .889E+00
                                                            328
                                                                 86
                                                                     230
                                                                              .701E+00
         202
                  .701E+00
                              272
                                   72 216
216
     58
                                       301
                                                .330E-01
                                                            329
                                                                  86
                                                                     301
                                                                            1 .860E-01
                1 .860E-01
                              273
                                    72
                                              1
217
     58
         301
                                              1 .670E-01
                                                            330
                                                                  86
                                                                     301
                                                                            1 .820E-01
                              274
218
     58
         301
                1
                  .820E-01
                                    72 301
                                    73
                                        74
                                              1 .115E+01
                                                            331
                                                                  87
                                                                      88
                                                                            1 .146E+01
                1 .146E+01
                              275
219
     59
          60
                                              4 .889E+00
                                                            332
                                                                  87
                                                                     231
                                                                              .701E+00
                                   73 217
220
     59
         203
                4
                  .701E+00
                              276
                                    73 301
                                              1 .670E-01
                                                            333
                                                                  87
                                                                     301
                                                                            1 .860E-01
     59
         301
                1 .860E-01
                              277
221
                                                                            1 .820E-01
                1 .820E-01
                                    73 301
                                              1 .310E-01
                                                            334
                                                                  87
                                                                     301
                              278
222
     59
         301
                                                                            1 .146E+01
                                                                      89
                 .146E+01
                                    74 75
                                              1 .115E+01
                                                            335
                                                                  88
223
     60
          61
                              279
                                                                  88 232
                                                                            4 .701E+00
                                    74 218
                                              4 .889E+00
                                                            336
                              280
      60 204
                4 .701E+00
224
```

5 l. E	m 03	Don't Brown Ma	Mag. 03	David Barre Fla	m
	Tag Conduct	Brnh From To		Brnh From To	-
337 88 301	1 .850E-01	393 102 301	1 .900E-01	449 116 301	1 .830E-01
338 88 301	1 .820E-01	394 103 104	1 .146E+01	450 117 118	1 .146E+01
339. 89 90	1 .146E+01	395 103 247	4 .701E+00	451 117 261	4 .701E+00
340 89 233	4 .701E+00	396 103 301	1 .760E-01	452 117 301	1 .830E-01
341 89 301	1 .850E-01	397 103 301	1 .840E-01	453 117 301	1 .830E-01
342 89 301	1 .810E-01	398 104 105	1 .146E+01	454 118 119	
343 90 91	1 .146E+01	399 104 248	4 .701E+00	455 118 262	4 .701E+00
344 90 234	4 .701E+00	400 104 301	1 .780E-01	456 118 301	1 .820E-01
345 90 301	1 .850E-01	401 104 301	1 .840E-01	457 118 301	1 .840E-01
346 90 301	1 .810E-01	402 105 106	1 .146E+01	458 119 120	1 .115E+01
347 91 92	1 .146E+01	403 105 249	4 .701E+00	459 119 263	4 .889E+00
348 91 235	4 .701E+00	404 105 301	1 .790E-01	460 119 301	1 .860E-01
349 91 301	1 .850E-01	405 105 301	1 .830E-01	461 119 301	1 .960E-01
350 91 301	1 .810E-01	406 106 107	1 .146E+01	462 120 121	1 .115E+01
351 92 93	1 .146E+01	407 106 250	4 .701E+00	463 120 264	4 .889E+00
352 92 236	4 .701E+00	408 106 301	1 .810E-01	464 120 301	1 .650E-01
353 92 301	1 .850E-01	409 106 301	1 .830E-01	465 120 301	1 .113E+00
354 92 301	1 .810E-01	410 107 108	1 .146E+01	466 121 122	1 .115E+01
355 93 94	1 .146E+01	411 107 251	4 .701E+00	467 121 265	4 .889E+00
356 93 237	4 .701E+00	412 107 301	1 .820E-01	468 121 301	1 .220E-01
357 93 301	1 .850E-01	413 107 301	1 .830E-01	469 121 301	1 .133E+00
358 93 301	1 .810E-01	414 108 109	1 .146E+01	470 122 123	1 .115E+01
359 94 95	1 .146E+01	415 108 252	4 .701E+00	471 122 266	4 .889E+00
360 94 238	4 .701E+00	416 108 301	1 .840E-01	472 122 301	1 .420E-01
361 94 301	1 .850E-01	417 108 301	1 .830E-01	473 123 124	1 .115E+01
362 94 301	1 .810E-01	418 109 110	1 .146E+01	474 123 267	4 .889E+00
363 95 96	1 .146E+01	419 109 253	4 .701E+00	475 123 301	1 .760E-01
364 95 239	4 .701E+00	420 109 301	1 .850E-01	476 124 125	1 .129E+01
365 95 301	1 .850E-01	421 109 301	1 .830E-01	477 124 268	4 .889E+00
366 95 301	1 .810E-01	422 110 111	1 .146E+01	478 124 301	1 .940E-01
367 96 97	1 .129E+01	423 110 254	4 .701E+00	479 125 126	1 .146E+01
368 96 240	4 .701E+00	424 110 301	1 .850E-01	480 125 269	4 .701E+00
369 96 301	1 .840E-01	425 110 301	1 .830E-01	481 125 301	1 .490E-01
370 96 301	1 .800E-01	426 111 112	1 .146E+01	482 125 301	1 .860E-01
371 97 98	1 .115E+01	427 111 255	4 .701E+00	483 126 127	1 .146E+01
372 97 241	4 .889E+00	428 111 301	1 .850E-01	484 126 270	4 .701E+00
373 97 301	1 .900E-01	429 111 301	1 .830E-01	485 126 301	1 .680E-01
				486 126 301	1 .860E-01
374 97 301	1 .930E-01	430 112 113			
375 98 99	1 .115E+01	431 112 256	4 .701E+00	487 127 128	1 .146E+01
376 98 242	4 .889E+00	432 112 301	1 .850E-01	488 127 271	4 .701E+00
377 98 301	1 .690E-01	433 112 301	1 .830E-01	489 127 301	1 .820E-01
378 98 301	1 .123E+00	434 113 114	1 .146E+01	490 127 301	1 .850E-01
379 99 100	1 .115E+01	435 113 257	4 .701E+00	491 128 129	1 .146E+01
380 99 243	4 .889E+00	436 113 301	1 .850E-01	492 128 272	4 .701E+00
381 99 301	1 .260E-01	437 113 301	1 .830E-01	493 128 301	1 .910E-01
382 99 301	1 .149E+00	438 114 115	1 .146E+01	494 128 301	1 .840E-01
383 100 101	1 .115E+01	439 114 258	4 .701E+00	495 129 130	1 .146E+01
384 100 244	4 .889E+00	440 114 301	1 .850E-01	496 129 273	4 .701E+00
385 100 301	1 .380E-01	441 114 301	1 .830E-01	497 129 301	1 .970E-01
386 101 102	1 .115E+01	442 115 116	1 .146E+01	498 129 301	1 .830E-01
387 101 245	4 .889E+00	443 115 259	4 .701E+00	499 130 131	1 .146E+01
388 101 301	1 .920E-01	444 115 301	1 .840E-01	500 130 274	4 .701E+00
389 101 301	1 .720E-01	445 115 301	1 .830E-01	501 130 301	1 .100E+00
390 102 103	1 .129E+01	446 116 117	1 .146E+01	502 130 301	1 .830E-01
391 102 246	4 .889E+00	447 116 260	4 .701E+00	503 131 132	1 .146E+01
392 102 301	1 .124E+00		1 .840E-01	504 131 275	4 .701E+00
JJE 102 JUI	1 .1240.00	.10 110 501			

```
Brnh From To Tag Conduct
                                                       Brnh From To Tag Conduct
Brnh From To Tag Conduct
                            561 158 157
                                           5 .174E+03
                                                        617 214 213
                                                                      5 .174E+03
505 131 301
              1 .101E+00
              1 .830E-01
                                    158
                                           5 .174E+03
                                                        618 215
                                                                214
                                                                       5 .174E+03
                            562 159
506 131 301
                            563 160 159
                                           5 .174E+03
                                                       619 216 215
                                                                       5 .174E+03
507 132 133
               1 .146E+01
               4 .701E+00
                                           5 .174E+03
                                                       620 217 216
                                                                       5 .174E+03
508 132 276
                            564 161 160
                                                                      5 .174E+03
               1 .100E+00
                                           5 .174E+03
                                                       621 218 217
509 132 301
                            565 162 161
              1 .830E-01
                                           5 .174E+03
                                                                218
                                                                      5 .174E+03
                            566 163 162
                                                       622 219
510 132 301
                                                                      5 .174E+03
               1 .146E+01
                            567 164 163
                                           5 .174E+03
                                                       623 220 219
511 133
        134
                                           5 .174E+03
               4 .701E+00
                                                       624 221 220
                                                                      5 .174E+03
512 133 277
                           568 165 164
                                                                      5 .174E+03
               1 .970E-01
                            569 166 165
                                           5 .174E+03
                                                       625 222 221
513 133 301
              1 .830E-01
                                           5 .174E+03
                                                       626 223
                                                                      5 .174E+03
                            570 167
                                    166
                                                                222
514 133 301
                                                       627 224 223
                                                                      5 .174E+03
                                           5 .174E+03
515 134
               1 .146E+01
                            571 168 167
        135
               4 .701E+00
                                           5 .174E+03
                                                       628 225 224
                                                                      5 .174E+03
516 134 278
                            572 169 168
                                           5 .174E+03
                                                                      5 .174E+03
               1 .910E-01
                                                       629 226 225
517 134 301
                            573 170 169
              1 .840E-01
                                           5 .174E+03
                                                       630 227
                                                                226
                                                                      5 .174E+03
                            574 171 170
518 134 301
                                           5 .174E+03
                                                       631 228 227
                                                                       5 .174E+03
                            575 172 171
519 135
        136
               1 .146E+01
                            576 173 172
                                           5 .174E+03
                                                       632 229 228
                                                                      5 .174E+03
520 135 279
               4 .701E+00
                                           5 .174E+03
                                                       633 230 229
                                                                       5 .174E+03
                            577 174 173
521 135 301
               1 .820E-01
              1 .840E-01
                                                                      5 .174E+03
522 135 301
                            578 175
                                    174
                                           5
                                            .174E+03
                                                       634 231
                                                                230
                                           5 .174E+03
                                                                       5 .174E+03
                                                       635 232 231
523 136
        137
               1 .146E+01
                            579 176 175
                                                                       5 .174E+03
524 136 280
               4 .701E+00
                            580 177 176
                                           5 .174E+03
                                                       636 233 232
                                           5 .174E+03
                                                       637 234 233
                                                                       5 .174E+03
525 136 301
                            581 178 177
               1 .680E-01
              1 .860E-01
                                                                       5 .174E+03
                            582 179
                                    178
                                           5
                                            .174E+03
                                                       638 235 234
526 136 301
                                                                       5 .174E+03
                                           5 .174E+03
                                                       639 236 235
                            583 180 179
527 137
               1 .146E+01
        138
                                                                      5 .174E+03
               4 .701E+00
                            584 181 180
                                           5 .174E+03
                                                       640 237 236
528 137 281
                                           5 .174E+03
                                                       641 238
                                                                237
                                                                       5 .174E+03
529 137 301
               1 .490E-01
                            585 182 181
                                                                       5 .174E+03
530 137
                            586
                               183 182
                                           5
                                            .174E+03
                                                       642 239
                                                                238
        301
               1 .870E-01
                                           5 .174E+03
               1 .146E+01
                            587 184 183
                                                       643 240 239
                                                                       5 .174E+03
531 138
        139
                                                                      5 .174E+03
                                           5 .174E+03
                                                       644 241 240
               4 .701E+00
                            588 185 184
532 138
        282
               1 .240E-01
                                            .174E+03
                                                        645 242
                                                                       5 .174E+03
                            589 186 185
                                                                241
533 138 301
                                           5 .174E+03
                                                       646 243 242
                                                                       5 .174E+03
               1 .880E-01
                            590 187 186
534 138
        301
                                                                       5 .174E+03
               1 .146E+01
                                           5
                                            .174E+03
                                                        647 244 243
535 139
                            591 188 187
        140
                                           5 .174E+03
                                                       648 245
                                                               244
                                                                       5 .174E+03
               4 .701E+00
                            592 189 188
536 139 283
                                                                       5 .174E+03
               1 .900E-01
                            593 190 189
                                           5
                                            .174E+03
                                                       649 246
                                                                245
537 139 301
                                                                       5 .174E+03
                                           5 .174E+03
                            594 191 190
                                                       650 247
                                                                246
538 140
               1 .160E+01
        141
                                           5 .174E+03
                                                                       5 .174E+03
               4 .701E+00
                            595 192 191
                                                        651 248 247
539 140 284
                                                                       5
                                                                        .174E+03
                            596 193 192
                                           5 .174E+03
                                                        652 249
                                                                248
540 140 301
               1 .910E-01
                                                                       5 .174E+03
                                            .174E+03
                                                        653 250
                                                                249
               1 .178E+01
                            597 194 193
                                           5
541 141 142
                                            .174E+03
                                                        654 251 250
                                                                       5 .174E+03
                            598 195 194
               4 .576E+00
542 141 285
                                           5 .174E+03
                                                        655 252 251
                                                                       5 .174E+03
543 142 143
               1 .178E+01
                            599 196 195
                                                                       5 .174E+03
                                            .174E+03
                                                        656 253
                                                                252
                            600 197 196
               4 .576E+00
544 142 286
                                            .174E+03
                                                                       5 .174E+03
                                           5
                                                        657 254 253
               1 .178E+01
                            601 198 197
545 143 144
                                                                       5 .174E+03
                                            .174E+03
                                                        658 255 254
                            602 199 198
546 143 287
               4 .576E+00
                                           5 .174E+03
                                                        659 256
                                                                255
                                                                       5
                                                                        .174E+03
                .576E+00
                            603 200 199
547 144 288
                                                                       5 .174E+03
                                           5
                                            .174E+03
                                                        660 257
                                                                256
                            604 201 200
               5 .174E+03
548 145 302
                                                                       5 .174E+03
                                            .174E+03
                                                        661 258 257
                            605 202 201
                                           5
549 146 145
               5
                 .174E+03
                                                                       5 .174E+03
                                            .174E+03
                                                        662 259 258
                .174E+03
                            606 203 202
                                           5
               5
550 147 146
                                                        663 260 259
                                                                       5 .174E+03
                                204 203
                                           5
                                            .174E+03
551 148 147
               5
                .174E+03
                            607
                                                                       5 .174E+03
                                            .174E+03
                                                        664 261 260
                            608
                                205 204
                                           5
               5
                .174E+03
552 149 148
                                                                       5 .174E+03
                                            .174E+03
                                                        665 262 261
                                206 205
553 150 149
               5
                 .174E+03
                            609
                                           5 .174E+03
                                                                       5 .174E+03
                .174E+03
                            610 207 206
                                                        666 263 262
554 151 150
                                                                       5 .174E+03
                            611 208 207
                                            .174E+03
                                                        667
                                                            264 263
                                           5
                .174E+03
555 152 151
               5
                                                                       5 .174E+03
                                            .174E+03
                                                        668 265 264
                 .174E+03
                                209 208
556 153 152
               5
                            612
                                                                       5 .174E+03
                                            .174E+03
                                                        669 266 265
                 .174E+03
                            613 210 209
               5
557 154
        153
                                           5 .174E+03
                                                                       5 .174E+03
                                                        670 267 266
                .174E+03
                            614 211 210
558 155 154
                                                                       5 .174E+03
                                           5
                                            .174E+03
                                                        671 268 267
               5 .174E+03
                            615 212 211
559 156 155
                                                                       5 .174E+03
                                           5 .174E+03
                                                       672 269 268
560 157 156
                 .174E+03
                            616 213 212
```

```
Brnh From To Tag Conduct
                5 .174E+03
673 270 269
674 271 270
                5 .174E+03
675 272 271
                5 .174E+03
                5 .174E+03
676 273 272
677 274 273
                5 .174E+03
                5 .174E+03
678 275 274
679 276 275
                5 .174E+03
5 .174E+03
680 277 276
681 278 277
                5 .174E+03
682 279 278
                5 .174E+03
                5 .174E+03
5 .174E+03
683 280 279
684 281 280
                5 .174E+03
685 282 281
                5 .174E+03
686 283 282
                5 .174E+03
5 .174E+03
687 284 283
688 285 284
                5 .174E+03
689 286 285
                5 .174E+03
5 .174E+03
690 287 286
691 288 287
```

TASS GENERAL INPUT MENU - SI Units

	Case Title: RUN 3. COMPLEX MOD	EL, MASS	FLOW OF	68 kg/	hr (150	lbm/hr)
(2)	Nodes		2	88		
(3)	Constant Temperature	5		2		
(4)	Unique Exponents			0		
(5)	Temperature Dependent	Conducta	ances	0		
(6)	Temperature Dependent	Heat In	outs	0		
(7)	Computational Accurac	ey .	.01	00	=	
(8)	Starting Temperature		25	.0		
Are	these inputs correct	(Y/N) ?	Y			

Cio Locath #1	Cir. Thirt							
(cm)	See Hand	rin spacing (2)	rin spacing (z) Thermal Conductivity of Copper (kReynolds Number Prandti Number	Reynolds Numbs	Prandl Number	٥	nner pipe diameter	Pipe Area
0 318	(1911)	(cm)	(W/cn·K)			(cm)	(cm)	(K. cm.)
	6100	0.0533	4.01	1900 00	0.707	0.635	0.463	0.134
						٠		
K-Value	Channel Width (b)	Channel Width (b) Effective Diameter	Heal Transfer Coefficient (h)	ē I	LeaY	Dist. Detween Nodes	Finalmote	N. Marken
	(cu)	(cm)	(Whydem K)	(cm)	(W/K)	(cm)		(W/K)
X			•				(
2			0.90			200.0	N/A	1.7784
2						0.302	NA	0.3064
ž						0.334	KA.	1 6043
KS			0620			0.367	NA.	1.4612
97	1.143	0.1019	0.03628	0.69300	000000	/900	Y.Y	03729
K7	1.143	0.1010	0.03628	0.66600	0.01333	0.367	099 9	0.0954
92	1.143	0.1019	0.03626	0.65200	0.01291	196.0	000 9	0,0940
2	0.004	0.0681	0.04746		0.00282	1960	9,000	\$280.0 0 00.0
K10	1.143	0.1010	0.03626	0.63500	0.01266	0.367	6 680	20000
KI	0.260	0.0690	0.03067		0.00658	0 367	6 860	0.0492
715 713	21.1	0.1010	0.03626	0.62100	0.01245	0.367	6.880	0.0693
2 3	0.414	0.0945	0.03813		0.00037	0.367	099.9	0.0662
K15	2 5 5 6	01010	0.03626	0.60800	0.01226	0.367	6 660	0.0679
K16		MORAN O	0.03/49		0.01136	196.0	6.880	0.0019
X12	0.620	alot:o	0.03626	0.50800	0.01210	0.367	6.880	0.0869
K16	1143	0.1010	0.03716	00000	0.01271	0.367	6.880	0.0011
K10	0.661	0.0080	979500	00000	0.01100	/96.0	099.9	0.0860
120	1.143	0.1010	0.03626	0.58400	100000	0.367	0,99.9	0.0960
2	0.716	0.0903	0 03600		901100	196.0	099.9	0 0854
221	1.143	0.1019	0.03626	0.68100	00100	100.0	099 9	0.1000
. 123	0.732	0.0994	0.03666		0.01410	0.367	0000	0.0850
124	1.143	0.1010	0.03626	0.58100	0.01164	0.367	0.880	0.1013
97	1.143	0.1010	0.03626	0.58100	0.01184	0 367	0889	0.0850
9 9	1.143	0.1010	0.03626	0.58500	0.01190	0.367	6.880	0.0855
3 5	1.143	0.1010	0.03626	0.50000	0.01198	196.0	6.860	0 0860
900	2	200	0.03626	0.59600	0.01207	0.367	6.880	0.0867
K30	1.143	01010	NA October 0			0.416	NA	1.2907
5			97950	0.0200	0.01216	196.0	6.880	0.0673
K32			C. C			0.465	NA NA	1.1524
K33	1.104	0 1018	0.03620	0 6 0000		0.465	N/A	0.4728
K34	0.808	0.1001	0.03670	0.09000	20000	0.463	250	0.0044
K36	0.296	0 0000	92000	0.44600	800000	0.465	7.540	0.070
K36	2.037	0.1040	0.03528	0.2030	90000	0.465	075.7	0.0410
K37	0.206	0.0904	800000	00000	667190	0.465	7.540	0.1355
K38	1.496	0.1030	0.03600	0.02200	16200	0.00	7.540	0 0210
K39	909.0	0.1001	0.03670	0 36000	90,000	2440	2.540	0.1171
K40	1.184	0.1021	0.03622	0.65100	0.01286	0.466	000	0.0642
X .	1.104	0.1010	0.03629	0.51400	0.01075	0.465	2 540	2101.0
							200	2000

ORSO D	O Grand	thund it	0.000	0.0074	0.000	9000 O		90000				0.0000	0.000		9790 0	9090 0	0.0020	0.0055	0.0010	9580 0	0.0789	2.ca0 0	19/00	9590 9	99,00	2000	0.0047	0.00	71900	0.0711	0.000	0 1240	97/00	1750 0	90500	2000	19700	th think	0 1004	00000	0 CUB/ D	0.0003	0.007	6.000.0	0.0073	0.0030	
0000								0000 9	0000 0	9 999		6 600	0000 0												7000						~	~	~ '	• ′	3 3	• *	• •	~		~	9		0,000	6 000	900	000 9	The second
141 0 367								20E 0 90E				/90.0	63 0.367							,			900						100.00						200						190.0			195.0	707:0	0.01166 11 0.367	795.0
161600 001241	atting mitte	0 61000 0 01229 (0.01210	000000 000000	0 28000 0 0 1510		•				•			-	•	_	_		991100 00100		COLIDO 002000						90010:0 00921:0			001120		tiano o onotti	31000	1.46600 0.11432			0.39000 0.00857			0.60400 0.01220						0.60000 0.01213
				•							3	3						•	•												•	•	•														_
979579	97,90,0	92950 0	92900 0	0.03626	0.03626	92900 0	0.03626	0.03020	0.03626	97960 0	97050 0	0.03626	97950 0	0.03626	97960.0	97950 0	92000 0	97900	97000	979500	0.000	0.03626	0.03026	0 03628	9790.0	0.03626	0.03626	0.03626	92900 0	909000	829500	Jeorge o	0.03741	0.03628	005500	97850 0	0.03584	0.03670	0.03616	0.03629	0.03626	0 03626	97960 0	0.03626	97900 0	97959 0	0.03626
9101 0	0.1010	01010	21010	2101.0	2010	0.1010	31010	2010	91010	2010	2 :	31010	01010	2010		200				0 1010	0.00.0	0.1010	0.1010	0.1010	01010	0.1019	01010	8101 0	01010	2010	91010	901.0	0.0073	0 0000	0.1048	\$000 a	0.1037	0.1001	0.1022	0.1018	0.1010	0.1016	0.1010	301.0	9707 0	201.0	200
1143	113	21.1	7	1.13	21.	2	7 .		7	247.	1.143	71.					2 5			1163	27.1	1.143	1143	1.143	1.143	1.143	1.143	1.143	2	7	0 100	9090	0990	0.266	2 631	0.200	0001	9000	1 225	100.	2	7.14	51.	2	77	77	2
K42	?	ž	× +2	4	7	2	2 3	Ker	2 2	2 2	3 3	2 3	2 3	3 3	2	8 9 W	S S	KBI	ž,	265	2	K65	K66	K 63	8 6	K69	20	2	2	2 3	K75	828	E S	200	2	3	ž	3	Ke3	2	3	2	2	2	2	3	ē

K94	1.143	01010	0.03626	0.56100	0.01152	298.0	6 840	40,000
K85	1.143	0.1019	0.03626	0.59800	0.01210	0.367	9000	0.0000
99	1.143	0.1010	0.03626	0 55900	0.01148	0 367	6.880	0.0826
K97	1.143	0.1019	0.03626	0.59600	0.01207	0 367	6.880	19900
KU6	1.143	01010	0.03626	0.55800	0.01147	0.367	6.680	0.0825
200	1.143	0.1010	0.03626	0 28200	0.01206	0.367	6.680	0 0866
201	1.143	0.1010	0.03626	0.55700	0.01145	0.367	6.880	0.0824
K102	2 5	0.101.0	0.03626	0.59400	0.01204	0.367	0999.9	0.0864
K103	-	0.1010	0.03626	0.55400	0.01140	196.0	6.880	0.0821
K104	1.143	0.1010		9 (0.01202	0.367	0.000	0.0863
K105	1.143	0.1019	0.03626	000000	0.01130	296.0	0989	0.0820
K106	1.143	0.1019	0 03626	0.55100	001135	0.367	000	0.0862
K107	1.143	0.1010	0.03626	0.59000	0.01100	0.367	9 990	0.0860
K108	1.143	0 1010	0.03626	0.54800	0.01130	0.367	6.840	0.0814
200	1.163	0.1010	0.03626	0.58900	0 01196	0.367	6.600	60.00
0110	27.	0.1010	0.03626	0.54500	0.01126	0.367	6.880	0.6910
200	200	0.1010	0.03626	0.58700	0.01193	196.0	6 880	0.0857
2112	200	0.1010	0.03626	0.54000	0.01117	0.367	6 860	0.0805
513	21.1	0.1010	0.03628	0.58600	0.01192	0.367	9 890	0.0856
****	2	0.1010	0.03626	0.53300	0.01108	196.0	6.660	1610.0
910	4	4	NA			961.0	NA	1 0619
9 5	143	0.1010	0.03626	0.58500	0.01100	0.367	6.660	0.0855
	24:1	0.1010	0.03626	0.52500	0.01092	0.367	9 990	0.0786
9 5			NA.			0.541	NA	0.982
900			0.670			0.510	Y.Y	0 526
150	200	2101.0	0.03626	0.58300	0.01167	0.541	7.540	0.0935
171	5	0.1021	0.03622	0.53400	0.01106	0.541	7.540	0.0874
1123			YN 9			0 312	NA	1.717
460	1 143	0,00	0/9/0			0.427	N/A	0 433
136	505	0.010	0.03626	0.58100	0 01 184	0.312	7.540	0.0933
6126	3	201.0	0.03600	0.67400	0.01314	0.312	7.540	0.1031
(127			AN 9			0.255	WA	2.100
(128	1 143	0.00	0/900			0.284	VN	0 268
620	2 037	0.1040	0.03626	000990	0.01162	0 255	7.540	0.0031
980			9/000	00000	019100	0.255	7.540	0.1254
131			0.670			0.420	KA:	1 251
132	1.143	0.101.0	0.03626	0.0073.0	*******	0.343	4 3 3	0.346
133	2.907	0.10476	0.03560		0.02086	0.420	6.040	0.0902
134			NA NA			0.447	AW.	1 200
136	1.143	0.1019	0.03626	0.57600	0.01176	0.420	8 040	CHOOL O
136	2.482	0.10444	0.03667		0.02077	0.429	8 040	0 1/12
13/	3	0.1018	0.03629	0.65500	0.01143	0 465	7.540	0.0902
92	049	0 10368	0.03585		0.02025	0.465	2540	0 1567
95	9090	0010	0.03670	0.40200	0.00690	0.465	7.540	0.0712
3 :	2000	0.10182	0.03626		0.01776	0 465	2.540	0.1376
	0.206	0.000	0.03926	0.15100	0.00373	0.465	7.540	0.0325
77:	0.350	0.09288	0.03057			0.465	7.540	0.0672
2 3	987.0	0.0004	0.03928	0.14500	0.00358	0.465	2.540	0.0314
146	1 104	10010	0.036/0	0.40100	0.00670	0.465	7.540	0.0703
2	101	0.1016	0.03629	0.54800	0.01133	0.465	7.540	0.0895

K146	1.143	0.1019	90900	0 56700	0.01161	0.430	040	2,200
K147	1.143	0.1019	0.03626	0.56400	0,01157	0.420	9040	2000
K148	2.037	0.1040	0.03578	0 97600	0.01647	0 256	7.540	0.1242
K140	1.143	0.1019	0.03626	0.56300	0.01155	0.255	7.540	0.0011
K150	1.496	0.1030	0.03600	0.71900	0 01375	0.312	7.540	0.1077
K151	1.143	0.1019	0 03626	0.56200	0.01153	0.312	7.540	0.0870
K162	1.184	0.1021	0.03622	0.58200	0.01184	0.541	7.540	0.0933
323	1.163	0.101.0	0.03626	0.56000	0.01150	0.541	7.540	0.0907
N. 100	353	3101.0	979676	0.57300	. 1/11/0	0.367	6.880	0.0842
35 X	1.45	91010	0.03028	0.0000	/*1100	0.367	6.660	0.0625
K157	1.143	0 1010	0.03626	0.55700	0.01146	0.307	0.880	0.0648
K168	1.143	0.1010	0.03626	0.58200	0.01185	0.367	6.880	0.0063
K159	1.143	0.1019	0.03626		0.01144	0.367	0899	0.0823
K160	1.143	0.1019	0.03626	0.58500	061100	0 367	6.860	0.0855
K161	1.143	0.1010	0.03626	0.55400	0.01140	0.367	6.660	0 0621
K162	1.143	0.1019	0.03626	0.58500	0.01190	0.367	6.860	0 0855
Ki63	1.143	0.1010	0.03626		0.01139	0.367	6.860	0.0820
Kiba	1.143	0.1010	0.03626		0.0110.0	0.367	6.860	0.0855
K165	1.143	0.1019	0.03626	0.55100	0.01135	0.367	098.9	0.0817
K100	1.143	0.101.0	0.03626	0.58500	0.01190		6.880	0.0855
K16/	1.143	0.1010	0.03626	0.55000	0.01134		0999	0.0816
A106	1.143	0.101.0	0.03626	0.58400	001166	0.367	099.9	0.0654
MIN	1.143	0.101.0	0.03626	0.54900	0.01132	0.367	6.880	0.0615
K170	1.143	0.101.0	0.03626	0.58400	0.01186	0.367	6.880	0.0854
KIN	34.	2010	0.03626	0.54800	0.01130	0.367	0.000	0.0614
K172	1.143	0.101.0	0.03626	0.58300	0.01187	0.367	0999	0 0853
	2.163	0.1010		0.54700	0.01129	0.367	6.880	0.0613
7174 K176		2010		0.56200	0.01186	0.367	0.000	0.0852
97.7	2 5	0.01.0	92900	0.54500	0.01126	0.367	099.9	0.0610
7217		9 9 9 9	0.03020	001960	0.01184	0.367	6.860	0.0850
KIZA	1143	01010	0.03020	0.54400	0.01124	196.0	6.880	0.0800
K179		01010	0.0000	0.56000	201102	1980	6.880	0.0649
K180		91010	0.03626	0.54300	221100	/96.0	6.800	90900
K181	1.143	91010	0.0000	0.57700	0.0117	0.367	0000	0.0846
K182	1.143	0.1019	0.03628	0 52600	001176	367	0000	9000
K163	1.143	0.1019	0.03626	0.54000	0.01117	0.367	6 880	0.0805
K164	1.143	0.1019	0.03626	0.57500	0.01174	0.367	6.860	0.0844
K185	1.143	0.1010		0.53900	0.01116	0.367	9 890	0.0004
K186	1.104	0.1018	0.03620	0.55300	0.01140	0.465	7.540	0.000
K167	1.225	0.1022	0.03618	0.58000	0.01100	0.465	7.540	0.0930
X126	909.0	00100	0.03670	0.30500	0.00867	0.465	7.540	0.0694
X100	050	0.1037	0.03584	0.89900	0.01577	0.465	2540	0.1220
2012	987.0	10000	0.03928	0.11600	0.00266	0.465	2 540	0.0260
KIN	2.031	0.1046	0.03560	1.44400	0.01917	0 465	7.540	0.1485
KINZ	0.20	0.0404	0.03928	0 19000	0.00443	0.465	2.640	0.0377
2017	909.5	0.100		0.41300	0.00002	0.465	7.540	0.0721
10 × 10 × 10 × 10 × 10 × 10 × 10 × 10 ×	5.	0.1016			0.01136	0.465		0.0897
CA120	3.7	0.000			0.01056			0.0763
K107	1.143	30.0			0.01163			90000
	2	2000	0.03626	0.51700	0.01070	0.367	0.000	0.0776

K196	1.143	0.1010	0.03626	0.66200	0.01461	0.363	0.000	0.000
K199	1.143	0.101.0	0.03626	0 53100	0.01102	298.0	6 640	0.0000
K200	1.143	0.101.0	0.03626	0.56600	0.01160	0.367	6.680	0.0634
K201	1143	0.101.0	0.03626	0 54400	0.01124	0.367	6 660	0.0909
202	1.143	0.1010	0.03626	0.56300	0.01155	0.367	6.680	0.0631
500	1.143	0.101.0	0.03626	0.55700	0.01145	0.367	6.680	0.0824
\$000 \$000	1.143	0 1010	0.03626	0.56200	0.01163	0.367	0 880	0.0830
K208	1.143	0.1010	0.03626	0.56800	0 01163	0.367	6.880	0.0836
K207	2	81010	0.03626	0.56100	0 01152	0.367	6.680	0.0628
K208	1143	0.1019	0.03626	009/5/0	0,01176	0.367	0 860	0.0845
K200	1.143	0.1019	0.03626	0.56100	0.01150	/96.0	6 880	0.0627
K210	1.143	0.1010	0.03626	0.55900	0.01148	0.367	0000	00000
K211	1.143	0.1019	0.03626	0.58400	0.01188	1961	6,660	0.0854
K212	1.143	0.1010	0.03626	0.55900	0.01148	0.367	088.9	0.0626
K213	1.143	0.1010	0.03626	0 58400	0.01188	0.367	6.880	0 0854
K214	1.143	0.1010	0.03626	0.55800	0.01147	0.367	0.860	0.0825
KZIB	5 T	0.1019	0.03626	0.58300	0 0 1 1 8 7	0.367	099.9	0.0853
223	2	91010	0.03626	0.55800	0.01147	0 367	6 680	0.0825
200	24.	0.1010	0.03626	0.56000	0.01162	0.367	9 890	0.0840
K210	2	0.101.0	0.03626	0.55600	0.01147	0 36/	6.880	0.0826
K220	143	9101.0	979676	0.57400	0.01173	0.367	6.880	0.0843
K223	2 5	0.1010	0.03626	0.55800	001147	0.367	0.880	0.0825
233		2000	979500	0.26/00	0.01161	0.367	6.880	0.0835
K223	5 1 1	91010	0.0000	0.56100	0.01152	0.367	6.880	0.0828
200	3 .	0.1010	0.03626	0.55800	0.01147	0.367	6 BB0	0 0625
7.32¢	1.143	0.1010	0.03626	0.66400	0.01157	0 367	0.880	0.0832
6773	1.143	0.1010	0.03626	0.55000	0.01134	0 367	6 680	0 0616
977	243	0.1010	0.03626	0.57000	991100	0.367	6.860	0.0638
177	5	0.1016	0.03620	0 62200	0.01088	0.465	7 540	0.0861
2330	1.104	1201.0	229600	0 60200	0.01215	0 465	7.540	99800
230	909	0.1001	0.03670	0.36500	90900 0	0.465	2540	0.0650
233	9000	0.1030	0.03600	0.77800	0.01449	0.465	7.540	0.1133
1000	3033	\$080.0	0.03028		0.00234	0 465	7.540	0.0220
K233	0.304	0.000	0.03036		0.01716	0 465	7.540	0.1333
K234	0.808	0.000	0.03620	0.202.0	0.00485	999 0	7 540	0 0417
K235	104	91010	0.03670	0.4430	999000	0.465	7.540	0.0/63
K236	1 143	01010	0.03636	0.50200	901100	0.465	200	0.0935
1537	1.143	91010	0.03626	058500	2021202	196.0		0.0863
K238	1.143	0.1019	0.03626	0.57600	921100	295.0	0.000	0.0000
K239	1.143	0.1019	0.03626	0.5690	0.01165	790	6 880	2000
K240	1.143	0.1019	0.03626		0.01155	0.367		0.0831
177	1.143	0.101.0	0.03626		0.01150	0.367		0.0827
242	1.143	0.1010		_	0.01146	0.367	6.850	0.0826
C43	1.143	0.1010		0.55900	0.01148	0.367	6 880	0 0826
545	1.143	0.1010	9.03626		0.01153	0.367	6.680	0.0830
555	1.143	0.1010	0.03626		0.01161	0 367	6 880	0.0635
246	1.143	0.1010	0.03626			0.367	6.880	0 0844
747	1.143	0.1019			0.01192	0.367	6 680	0.0856
240	21.5	0.1010			0.01212	0.367		0.0670
447	1.145	0.101 %	0.03626	0.61200	0.01232	0.367	6.860	0.0884

0.0898 0.0911 79.0400

6 860 8 860 8 860

0.367 0.367 N/A

0.01253 0.01272 NA

0.62600 0.63900 NA

0.03626 0.03626 N/A

0.1019 0.1019 N/A

1.143 1.143 NA

K250 K251 K252

Dwnh	Ewaw Ma	Шал	Conduct	Dank	Ewow Mo	m-	a Conduct	Danie	T T	~ -	
			.178E+01	57			g Conduct .860E-01				g Conduct
1 2	1 2 1 145		.306E+00		17 301			113	32 176		.373E+00
		_		58	17 301	1		114	32 301	1	.860E-01
3	2 3	1	.178E+01	59	18 19	1		115	32 301	1	.830E-01
4	2 146		.306E+00	60	18 162	4		116	33 34	1	.146E+01
5	3 4	1		61	18 301	1		117	33 177	4	.373E+00
6	3 147	4	.306E+00	62	18 301	1	.820E-01	118	33 301	1	.860E-01
7	4 5	1	.160E+01	63	19 20	1	.146E+01	119	33 301	1	.830E-01
8	4 148	4	.306E+00	64	19 163	4	.373E+00	120	34 35	1	.146E+01
9	5 6	1	.146E+01	65	19 301	1	.870E-01	121	34 178	4	.373E+00
10	5 149	4	.373 E +00	66	19 301	1	.680E-01	122	34 301	1	.860E-01
11	5 301	1	.954E-01	67	20 21	1	.129E+01	123	34 301	1	.830E-01
12	6 7	1	.146E+01	68	20 164	4	.373E+00	124	35 36	1	.146E+01
13	6 150	4	.373E+00	69	20 301	1	.870E-01	125	35 179	4	.373E+00
14	6 301	1	.940E-01	70	20 301	1	.490E-01	126	35 301	1	.860E-01
15	7 8	1	.146E+01	71	21 22	1	.115E+01	127	35 301	1	.820E-01
16	7 151	4	.373E+00	72	21 165	4	.473E+00	128	36 37	1	.146E+01
17	7 301	1	.920E-01	73	21 301	1	.940E-01	129	36 180	4	.373E+00
18	7 301	1	.240E-01	74	22 23	1		130	36 301	1	.860E-01
19	8 9	1	.146E+01	75	22 166	4	.473E+00	131	36 301	1	.810E-01
20	8 152	4	.373E+00	76	22 301	1	.770E-01	132	37 38	1	.146E+01
21	8 301	1	.910E-01	77	23 24	1		133	37 181	4	.373E+00
22	8 301	1	.490E-01	78	23 167	4	.473E+00	134	37 301	i	.850E-01
23	9 10	1	.146E+01	79	23 301	1		135	37 301	ī	.800E-01
24	9 153	4	.373E+00	80	24 25	1	.115E+01	136	38 39	1	.146E+01
25	9 301	1	.890E-01	81	24 168	4		137	38 182	4	.373E+00
26	9 301	ī	.680E-01	82	24 301	i	.136E+00	138	38 301	ī	.850E-01
27	10 11	ī	.146E+01	83	24 301	ī	.220E-01	139	38 301	ī	.780E-01
28	10 154	4	.373E+00	84	25 26	ī	.115E+01	140	39 40	1	.146E+01
29	10 301	1	.880E-01	85	25 169	4	.473E+00	141	39 183	4	.373E+00
30	10 301	1	.820E-01	86	25 301	1	.117E+00	142	39 301	1	.850E-01
31	11 12	ī	.146E+01	87	25 301	ī	.640E-01	143	39 301	ī	.770E-01
32	11 155	4	.373E+00	88	26 27	i	.129E+01	144	40 41	1	.146E+01
33	11 301	1	.870E-01	89	26 170	4	.473E+00	145	40 184	4	.373E+00
34	11 301	1	.910E-01	90	26 301	1	.101E+00	146	40 301	1	.850E-01
35	12 13	1	.146E+01	91	26 301	1	.850E-01	147	40 301	1	.750E-01
36	12 156	4	.373E+00	92	27 28	1		148	41 42	1	.146E+01
. 37	12 301	1	.860E-01	93	27 171	4	.373E+00	149	41 185	4	.373E+00
38	12 301	1	.970E-01	94	27 301	1	.890E-01	150	41 301	1	.850E-01
39	13 14	_	.146E+01	95	27 301	1	.810E-01	151	41 301	1	.730E-01
40	13 157	4	.373E+00	96	28 29	1	,	152	42 43	1	.129E+01
41	13 301	1	.850E-01	97	28 172	4	.373E+00	153	42 186	4	.373E+00
42	13 301	1	.100E+00	98	28 301	1	.880E-01	154		1	.850E-01
43	14 15		.146E+01	99	28 301	1	.810E-01	155	42 301 42 301		.710E-01
44	14 158	1	.373E+00	100	29 30	1	.146E+01	156	42 301	1	.115E+01
	14 301		.850E-01		29 173	4	.373E+00	157	43 187	4	.473E+00
45		1	.101E+00	101		_	.870E-01	158		_	
46	14 301	1		102		1	- 1		43 301	1	.910E-01
47	15 16		.146E+01	103	29 301 30 31	1	.820E-01	159 160	43 301 44 45	1	.124E+00 .115E+01
48.	15 159			104		1			44 45 44 188		.115E+01
49	15 301	1		105	30 174	4		161		4	
50	15 301	1	.100E+00	106	30 301	1		162			.730E-01
51 52	16 17	1	.146E+01	107	30 301	1		163	44 301	1	.920E-01
52	16 160		.373E+00	108	31 32	1	.146E+01	164	45 46	1	.115E+01
53	16 301	1	.850E-01	109	31 175	4		165	45 189	4	.473E+00
54	16 301	1	.970E-01	110	31 301	1	.870E-01	166	45 301	1	.390E-01
55	17 18		.146E+01	111	31 301	1		167	46 47	1	
56	17 161	4	.373E+00	112	32 33	1	.146E+01	168	46 190	4	.473E+00

172 17 191														
169 46 301 1 .150E+00 225 60 301 1 .860E+01 281 74 301 1 .138E+00 170 46 301 1 .250E+01 226 60 301 1 .810E+01 283 75 76 1 .120E+01 171 47 48 1 .115E+01 227 61 62 1 .146E+01 283 75 76 1 .120E+01 172 47 191 4 .473E+00 228 61 205 4 .373E+00 285 75 301 1 .57E+00 174 47 301 1 .139E+01 230 61 301 1 .860E+01 285 75 301 1 .157E+00 174 47 301 1 .129E+01 231 62 63 1 .146E+01 287 76 77 1 .125E+01 176 48 192 4 .473E+00 222 62 206 4 .373E+00 287 67 53 01 1 .171E+00 177 48 301 1 .30E+01 233 62 301 1 .860E+01 287 76 77 1 .125E+01 178 48 301 1 .30E+01 233 62 301 1 .860E+01 287 77 78 1 .210E+01 180 49 193 4 .373E+00 236 63 207 4 .373E+00 292 77 221 4 .348E+01 181 49 301 1 .830E+01 239 64 65 1 .108E+01 294 77 301 1 .72E+01 183 50 51 1 .46E+01 239 64 65 1 .108E+01 294 77 301 1 .72E+01 183 50 51 1 .46E+01 239 64 65 1 .108E+01 296 78 294 294 295 301 1 .830E+01 239 64 65 1 .108E+01 296 78 294 294 295 301 1 .830E+01 239 64 65 1 .108E+01 296 78 294 294 294 295 301 1 .830E+01 239 64 65 1 .108E+01 296 78 294 294 294 294 294 295 301 1 .830E+01 239 64 65 1 .108E+01 296 78 294 294 294 294 294 294 294 294 294 294	Brnh	From To	Tag	Conduct	Brnh	Fro	om To	Tag	Conduct	Brnh	Fro	om To		
172 17 18 1 115E-01 227 61 62 1 146E+01 283 75 76 1 120E+01 173 47 301 1 127E-00 229 61 301 1 860E-01 285 75 301 1 157E+01 174 47 301 1 630E-01 230 61 301 1 860E-01 285 75 301 1 157E+01 175 48 49 1 129E+01 231 62 63 1 146E+01 287 76 77 1 125E+01 176 48 192 4 473E+00 232 62 206 4 373E+00 288 76 220 4 348E+01 177 48 301 1 890E-01 234 62 301 1 860E-01 239 76 301 1 171E+00 178 48 301 1 890E-01 234 62 301 1 860E-01 239 76 301 1 172E+01 178 49 301 1 830E-01 237 63 301 1 860E-01 239 76 301 1 172E+01 180 49 193 4 373E+00 236 63 207 4 373E+00 237 77 78 1 172E+01 181 49 301 1 830E-01 238 63 301 1 860E-01 239 77 301 1 172E+01 183 50 51 1 146E+01 236 64 65 1 168E+01 239 77 301 1 172E+01 183 50 51 1 146E+01 236 64 65 1 168E+01 239 77 301 1 172E+01 185 50 301 1 830E-01 239 64 65 1 168E-01 239 77 301 1 172E+01 185 50 301 1 830E-01 237 64 65 1 168E-01 239 77 301 1 172E+01 186 50 301 1 830E-01 240 64 65 1 108E+01 239 78 301 1 124E+00 239 23					225	60	301	1	.860E-01	281	74			
172 17 191	170	46 301	1	.250E-01	226	60	301	1	.810E-01	282			1	.700E-01
173 47 301 1 .127E+00 229 61 301 1 .860E+01 286 75 301 1 .157E+00 174 47 301 1 .690E+01 231 62 63 1 .146E+01 287 76 77 1 .125E+01 176 48 192 4 .473E+00 232 62 206 4 .373E+00 288 76 20 4 .348E+00 177 48 301 1 .00E+00 233 62 206 4 .373E+00 288 76 20 4 .348E+00 178 48 301 1 .890E+01 234 62 301 1 .80E+01 290 76 301 1 .71E+00 178 48 301 1 .890E+01 234 62 301 1 .80E+01 290 76 301 1 .980E+01 180 49 193 4 .373E+00 236 63 207 4 .373E+00 292 77 221 4 .348E+00 181 49 301 1 .880E+01 237 63 301 1 .800E+01 290 76 301 1 .980E+01 181 49 301 1 .880E+01 237 63 301 1 .800E+01 297 77 78 1 .117E+01 182 49 301 1 .830E+01 238 63 301 1 .800E+01 297 77 78 1 .172E+01 183 50 51 1 .146E+01 239 64 65 1 .108E+01 297 77 78 1 .172E+01 183 50 51 1 .146E+01 239 64 65 1 .108E+01 297 77 78 1 .172E+01 183 50 50 11 .830E+01 240 64 208 4 .373E+00 296 78 222 4 .288E+00 185 50 301 1 .830E+01 246 64 208 4 .373E+00 297 78 301 1 .172E+01 186 50 301 1 .830E+01 246 65 301 1 .790E+01 298 78 301 1 .190E+01 187 51 52 1 .146E+01 246 65 301 1 .790E+01 298 78 301 1 .930E+01 187 51 52 1 .146E+01 246 65 301 1 .940E+01 297 78 301 1 .930E+01 187 51 52 1 .146E+01 246 65 301 1 .940E+01 301 79 301 1 .108E+01 199 51 301 1 .830E+01 246 65 301 1 .940E+01 301 79 301 1 .108E+01 199 51 301 1 .830E+01 246 65 301 1 .940E+01 301 79 301 1 .108E+01 199 51 301 1 .830E+01 246 65 301 1 .940E+01 301 79 301 1 .108E+01 199 52 53 1 .146E+01 246 65 301 1 .940E+01 301 79 301 1 .108E+01 199 52 53 1 .146E+01 257 66 67 1 .172E+01 303 80 81 1 .108E+01 199 53 301 1 .870E+01 255 68 69 11 .15E+01 301 81 301 1 .830E+01 255 68 69 11 .15E+01 301 81 301 1 .830E+01 255 68 69 11 .15E+01 301 81 301 1 .830E+01 255 68 69 11 .15E+01 31 82 83 301 1 .800E+01 255 68 69 11 .15E+01 31 82 83 301 1 .800E+01 255 68 69 11 .15E+01 31 82 83 301 1 .800E+01 255 68 69 11 .15E+01 31 82 83 301 1 .800E+01 255 68 69 11 .15E+01 31 82 83 301 1 .800E+01 255 68 69 11 .15E+01 31 88 81 301 1 .800E+01 255 68 69 11 .15E+01 31 88 83 301 1 .800E+01 255 68 69 1 .12EE+01 318 83 301 1 .800E+01 255 68 69 1 .12EE+01 318 83 301 1 .800E+01	171	47 48	1	.115E+01	227	61	62	1	.146E+01	283			1	.120E+01
174 47 301	172	47 191	4	.473E+00	228	61	205	4	.373E+00	284	75	219	4	.473E+00
175	173	47 301	1	.127E+00	229	61	301	1	.860E-01	285	75	301	1	.157E+00
175	174	47 301	1	.690E-01	230	61	301	1	.810E-01	286	75	301	1	.900E-01
176			1	.129E+01	231	62	63	1	.146E+01	287	76	77	1	.125E+01
178			4	.473E+00	232	62	206	4	.373E+00	288	76	220	4	.348E+00
178			1			62	301	1	.860E-01	289	76	301	1	.171E+00
1.1						62	301	1	.810E-01	290	76	301	1	.980E-01
180						63	64	1	.146E+01	291	77	78	1	.210E+01
181 49 301 1 .880E-01 237 63 301 1 .860E-01 293 77 301 1 .970E-01 183 50 51 1 .146E+01 239 64 65 1 .108E+01 295 78 79 1 .172E+01 184 50 194 4 .373E+00 240 64 208 4 .373E+00 296 78 292 78 301 1 .790E-01 297 78 301 1 .790E-01 298 78 301 1 .910E-01 246 65 66 1 .992E+00 299 79 80 1 .910E-01 249 66 1 .992E+00 299 79 80 1 .910E-01 289 79 80 1 .910E-01 299 80 1 .922E+00 299 79 80 1 .922E+00 202 79 301 1						63	207	4	.373E+00	292	77	221	4	.348E+00
182 49 301			-					1	.860E-01	293	77	301	1	.172E+00
183						63		1	.800E-01	294	77	301	1	.970E-01
184 50 194 4 .373E+00 240 64 208 4 .373E+00 296 78 222 4 .288E+00 186 50 301 1 .830E-01 242 64 301 1 .910E-01 1 .910E-01 27 78 301 1 .910E-01 1 .910E-01 287 78 301 1 .910E-01 1 .910E-01 287 78 301 1 .910E-01 1 .910E-01 288 51 195 4 .373E+00 244 65 209 4 .526E+00 300 79 223 4 .433E+00 1 .940E-01 301 .79 301 1 .980E-01 301 .930E-01 1 .930E-01 302 79 301 1 .870E-01 1 .930E-01 302 79 301 1 .930E-01 303 301 1 .930E-01 302 79 301								1	.108E+01	295	78	79	1	.172E+01
185 50 301 1 .870E-01 241 64 301 1 .860E-01 297 78 301 1 .124E+06 186 50 301 1 .830E-01 242 64 301 1 .790E-01 298 78 301 1 .910E-01 188 51 155 4 .373E+00 244 65 209 4 .526E+00 300 79 230 4 .433E+00 189 51 301 1 .830E-01 246 65 301 1 .940E-01 301 79 301 1 .108E+01 190 51 301 1 .870E-01 246 65 301 1 .870E-01 303 80 81 1 .108E+01 192 52 196 4 .373E+00 250 66 301 1 .930E-01 305 80 301 1 .930E-01 <				1		64	208	4	.373E+00	296	78	222	4	.288E+00
186 50 301 1 .830E-01 242 64 301 1 .790E-01 298 78 301 1 .910E-01 187 51 52 1 .146E+01 243 65 66 1 .992E+00 299 79 80 1 .992E+00 188 51 195 4 .373E+00 244 65 209 4 .526E+00 300 79 223 4 .433E+00 190 51 301 1 .830E-01 245 65 301 1 .870E-01 302 79 301 1 .108E+01 190 51 301 1 .830E-01 246 65 301 1 .870E-01 302 79 301 1 .108E+01 191 52 53 1 .146E+01 247 66 67 1 .172E+01 303 80 81 1 .108E+01 192 52 196 4 .373E+00 248 66 210 4 .433E+00 304 80 224 4 .526E+00 193 52 301 1 .830E-01 249 66 301 1 .930E-01 305 80 301 1 .930E-01 195 53 54 1 .146E+01 251 67 68 1 .210E+01 307 88 224 4 .526E+00 194 52 301 1 .830E-01 251 67 68 1 .210E+01 307 88 22 4 .373E+00 252 67 211 4 .288E+00 308 81 225 4 .373E+00 196 53 197 4 .373E+00 252 67 211 4 .288E+00 308 81 225 4 .373E+00 198 53 301 1 .830E-01 254 67 301 1 .930E-01 309 81 301 1 .840E-01 198 53 301 1 .830E-01 254 67 301 1 .125E+00 310 81 301 1 .840E-01 200 54 198 4 .373E+00 256 68 212 4 .348E+00 312 82 226 4 .373E+00 201 54 301 1 .830E-01 257 68 301 1 .990E-01 313 82 301 1 .830E-01 257 68 301 1 .990E-01 313 82 301 1 .850E-01 203 55 56 1 .146E+01 255 68 69 1 .125E+01 311 82 83 1 .146E+01 200 54 301 1 .830E-01 257 68 301 1 .990E-01 313 82 301 1 .850E-01 203 55 56 1 .146E+01 259 69 70 1 .120E+01 315 83 84 1 .146E+01 200 55 301 1 .830E-01 258 68 301 1 .172E+00 314 82 301 1 .850E-01 203 55 56 1 .146E+01 259 69 70 1 .120E+01 315 83 84 1 .146E+01 204 55 199 4 .373E+00 260 69 213 4 .348E+00 316 83 227 4 .373E+00 205 55 301 1 .830E-01 266 70 301 1 .900E-01 315 83 84 1 .146E+01 207 56 301 1 .830E-01 266 70 301 1 .171E+00 318 83 301 1 .820E-01 215 56 87 1 .146E+01 263 70 71 1 .115E+01 319 84 85 1 .146E+01 215 57 88 301 1 .820E-01 215 58 59 1 .146E+01 267 71 72 1 .115E+01 313 82 83 301 1 .820E-01 215 58 59 1 .146E+01 267 71 72 73 301 1 .15E+01 328 85 301 1 .820E-01 215 58 59 1 .146E+01 277 73 301 1 .15E+01 333 86 301 1 .820E-01 215 58 59 1 .146E+01 277 73 301 1 .15E+01 333 87 301 1 .820E-01 277 73 301 1 .15E+01 333 87 301 1 .820E-01 277 73 301 1 .15E+01 333 87 301 1 .820E-01 277 73 301 1 .15E+01			_					1		297	78	301	1	.124E+00
187 51 52 1 .146E+01 243 65 66 1 .992E+00 299 79 80 1 .992E+00 188 51 195 4 .373E+00 244 65 209 4 .526E+00 300 79 223 4 .433E+00 190 51 301 1 .870E-01 245 65 301 1 .940E-01 301 79 301 1 .108E+01 191 52 53 1 .146E+01 247 66 67 1 .172E+01 303 80 81 1 .108E+01 191 52 53 1 .146E+01 247 66 67 1 .172E+01 303 80 81 1 .108E+01 192 52 196 4 .373E+00 248 66 210 4 .433E+00 304 80 224 4 .526E+00 193 52 301 1 .870E-01 249 66 301 1 .930E-01 305 80 301 1 .930E-01 194 52 301 1 .830E-01 250 66 301 1 .103E+00 306 80 301 1 .930E-01 195 53 54 1 .146E+01 251 67 68 1 .210E+01 307 81 82 1 .146E+01 196 53 197 4 .373E+00 252 67 211 4 .288E+00 308 81 225 4 .373E+00 198 53 301 1 .870E-01 253 67 301 1 .930E-01 307 81 82 1 .146E+01 198 53 301 1 .830E-01 253 67 301 1 .125E+00 310 81 301 1 .840E-01 199 54 55 1 .146E+01 255 68 69 1 .125E+01 311 82 83 1 .146E+01 200 54 198 4 .373E+00 256 68 212 4 .348E+00 312 82 226 4 .373E+00 103 55 55 301 1 .870E-01 257 68 301 1 .990E-01 313 82 301 1 .850E-01 202 54 301 1 .830E-01 258 68 301 1 .172E+00 310 83 201 1 .850E-01 203 55 56 1 .146E+01 259 69 70 1 .120E+01 315 83 84 1 .146E+01 203 55 56 1 .146E+01 259 69 70 1 .120E+01 315 83 84 1 .146E+01 204 55 199 4 .373E+00 260 69 213 4 .348E+00 316 83 227 4 .373E+00 205 55 301 1 .870E-01 261 69 301 1 .171E+00 318 83 301 1 .820E-01 207 56 57 1 .146E+01 263 70 71 1 .15E+01 319 84 85 1 .146E+01 208 56 200 4 .373E+00 264 70 214 4 .473E+00 320 84 228 4 .373E+00 209 56 301 1 .870E-01 266 70 301 1 .15FE+01 321 84 301 1 .820E-01 210 56 301 1 .820E-01 266 70 301 1 .15FE+01 321 84 301 1 .820E-01 210 56 301 1 .820E-01 266 70 301 1 .15FE+01 322 85 301 1 .820E-01 210 58 801 1 .820E-01 277 72 73 1 .115E+01 329 86 301 1 .820E-01 210 59 60 1 .146E+01 277 72 73 1 .115E+01 329 86 301 1 .820E-01 210 59 60 1 .146E+01 277 73 301 1 .15FE+01 323 86 301 1 .820E-01 210 59 301 1 .820E-01 277 73 301 1 .15FE+01 332 87 301 1 .820E-01 210 59 301 1 .820E-01 277 73 301 1 .15FE+01 332 87 301 1 .820E-01 277 73 301 1 .15FE+01 333 87 301 1 .820E-01 277 73 301 1 .15FE+01 333 87 301 1 .820E-01 222 5											78	301	1	.910E-01
188									,		79	80	1	.992E+00
189 51 301											79	223	4	.433E+00
190 51 301 1 .830E-01 246 65 301 1 .870E-01 302 79 301 1 .870E-01 191 52 53 1 .146E+01 247 66 67 1 .172E+01 303 80 81 1 .108E+01 192 52 196 4 .373E+00 248 66 210 4 .433E+00 304 80 224 4 .526E+00 193 52 301 1 .870E-01 249 66 301 1 .930E-01 305 80 301 1 .930E-01 194 52 301 1 .830E-01 250 66 301 1 .103E+00 306 80 301 1 .930E-01 195 53 54 1 .146E+01 251 67 68 1 .210E+01 307 81 82 1 .146E+01 196 53 197 4 .373E+00 252 67 211 4 .288E+00 308 81 225 4 .373E+00 198 53 301 1 .870E-01 253 67 301 1 .930E-01 309 81 301 1 .840E-01 198 53 301 1 .870E-01 253 67 301 1 .930E-01 309 81 301 1 .840E-01 199 54 55 1 .146E+01 255 68 69 1 .125E+01 311 82 83 1 .146E+01 200 54 198 4 .373E+00 256 68 212 4 .348E+00 312 82 226 4 .373E+00 201 54 301 1 .870E-01 257 68 301 1 .990E-01 313 82 301 1 .830E-01 258 68 301 1 .172E+00 314 82 301 1 .850E-01 203 55 56 1 .146E+01 259 69 70 1 .120E+01 315 83 84 1 .146E+01 204 55 199 4 .373E+00 260 69 213 4 .348E+00 316 83 227 4 .373E+00 205 55 301 1 .870E-01 261 69 301 1 .990E-01 317 83 301 1 .820E-01 207 56 57 1 .146E+01 263 70 71 1 .15E+01 318 83 301 1 .820E-01 207 56 501 1 .870E-01 262 69 301 1 .900E-01 317 83 301 1 .820E-01 207 56 301 1 .870E-01 263 70 71 1 .115E+01 318 83 301 1 .820E-01 210 56 301 1 .820E-01 265 70 301 1 .900E-01 317 83 301 1 .820E-01 210 56 301 1 .820E-01 266 70 301 1 .900E-01 317 83 301 1 .820E-01 210 56 301 1 .820E-01 267 71 72 1 .115E+01 323 85 86 1 .146E+01 263 70 71 1 .115E+01 323 85 86 1 .146E+01 263 70 71 1 .115E+01 323 85 86 1 .146E+01 267 71 72 1 .115E+01 323 85 86 1 .146E+01 267 71 72 1 .115E+01 323 85 86 1 .146E+01 267 71 72 1 .115E+01 329 86 301 1 .820E-01 215 58 59 1 .146E+01 267 71 72 1 .115E+01 329 86 301 1 .820E-01 215 58 801 1 .820E-01 277 73 301 1 .15E+01 329 86 301 1 .820E-01 277 73 301 1 .15E+01 329 86 301 1 .820E-01 277 73 301 1 .15E+01 329 86 301 1 .820E-01 278 73 301 1 .310E-01 330 86 301 1 .820E-01 275 73 74 1 .115E+01 330 87 301 1 .820E-01 275 73 74 1 .115E+01 330 88 81 .146E+01 275 73 74 1 .115E+01 330 88 81 .146E+02 220 59 301 1 .860E-01 277 73 301 1 .670E-			_								79		1	.108E+00
191 52 53													1	.870E-01
192 52 196				•										1
193 52 301 1 .870E-01 249 66 301 1 .930E-01 305 80 301 1 .930E-01 194 52 301 1 .830E-01 250 66 301 1 .103E+00 306 80 301 1 .910E-01 195 53 54 1 .146E+01 251 67 68 1 .210E+01 307 81 82 1 .146E+01 196 53 197 4 .373E+00 252 67 211 4 .288E+00 308 81 225 4 .373E+00 197 53 301 1 .870E-01 253 67 301 1 .930E-01 309 81 301 1 .840E-01 198 53 301 1 .830E-01 254 67 301 1 .125E+00 310 81 301 1 .840E-01 199 54 55 1 .146E+01 255 68 69 1 .125E+01 311 82 83 1 .146E+01 200 54 198 4 .373E+00 256 68 212 4 .348E+00 312 82 226 4 .373E+00 201 54 301 1 .830E-01 257 68 301 1 .990E-01 313 82 301 1 .850E-01 202 54 301 1 .830E-01 258 68 301 1 .72E+00 314 82 301 1 .850E-01 203 55 56 1 .146E+01 259 69 70 1 .120E+01 315 83 84 1 .146E+01 204 55 199 4 .373E+00 260 69 213 4 .348E+00 314 82 301 1 .850E-01 205 55 301 1 .870E-01 261 69 301 1 .990E-01 315 83 84 1 .146E+01 206 55 301 1 .830E-01 262 69 301 1 .171E+00 318 83 301 1 .820E-01 206 55 301 1 .870E-01 262 69 301 1 .171E+00 318 83 301 1 .820E-01 207 56 57 1 .146E+01 263 70 71 1 .115E+01 318 83 301 1 .820E-01 209 56 301 1 .870E-01 265 70 301 1 .900E-01 317 83 301 1 .820E-01 209 56 301 1 .870E-01 265 70 301 1 .900E-01 321 84 301 1 .800E-01 21 57 58 1 .146E+01 267 71 72 1 .115E+01 328 84 85 1 .146E+01 21 57 301 1 .820E-01 266 70 301 1 .900E-01 321 84 301 1 .800E-01 21 57 58 1 .146E+01 267 71 72 1 .115E+01 328 85 86 1 .146E+01 267 71 72 1 .115E+01 328 85 86 1 .146E+01 267 71 72 1 .115E+01 328 86 230 4 .373E+00 21 58 59 1 .146E+01 270 71 301 1 .157E+00 322 84 301 1 .820E-01 215 58 59 1 .146E+01 270 71 301 1 .157E+00 328 86 230 4 .373E+00 270 72 216 4 .473E+00 328 86 230 4 .373E+00 270 72 216 4 .473E+00 328 86 230 1 1 .820E-01 270 71 301 1 .138E+00 328 86 301 1 .820E-01 270 71 301 1 .138E+00 328 86 301 1 .820E-01 270 71 301 1 .138E+00 328 86 301 1 .820E-01 270 71 301 1 .15E+01 33 87 301 1 .820E-01 270 71 301 1 .15E+01 33 87 301 1 .820E-01 270 71 301 1 .15E+01 33 87 301 1 .820E-01 270 71 301 1 .15E+01 33 88 80 1 1 .820E-01 270 71 301 1 .15E+01 33 88 80 1 1 .820E-01 270 72 301 1 .330E-01 330 86 301 1				3									4	.526E+00
194 52 301 1 .830E-01 250 66 301 1 .103E+00 306 80 301 1 .910E-01 195 53 54 1 .146E+01 251 67 68 1 .210E+01 307 81 82 1 .146E+01 196 53 197 4 .373E+00 252 67 211 4 .288E+00 308 81 225 4 .373E+00 198 53 301 1 .870E-01 253 67 301 1 .930E-01 309 81 301 1 .840E-01 199 54 55 1 .146E+01 255 68 69 1 .125E+01 310 81 301 1 .830E-01 199 54 55 1 .146E+01 255 68 69 1 .125E+01 311 82 83 1 .146E+01 200 54 198 4 .373E+00 256 68 212 4 .348E+00 312 82 226 4 .373E+00 202 54 301 1 .870E-01 257 68 301 1 .172E+00 312 82 226 4 .373E+00 203 55 56 1 .146E+01 259 69 70 1 .120E+01 315 83 84 1 .146E+01 203 55 56 1 .146E+01 259 69 70 1 .120E+01 315 83 84 1 .146E+01 204 55 199 4 .373E+00 260 69 213 4 .348E+00 316 83 227 4 .373E+00 205 55 301 1 .870E-01 261 69 301 1 .990E-01 315 83 84 1 .146E+01 206 55 301 1 .830E-01 262 69 301 1 .771E+00 318 83 301 1 .850E-01 207 56 57 1 .146E+01 263 70 71 1 .115E+01 319 84 85 1 .146E+01 209 56 301 1 .870E-01 265 70 301 1 .990E-01 317 83 301 1 .850E-01 209 56 301 1 .870E-01 265 70 301 1 .900E-01 317 83 301 1 .850E-01 210 56 301 1 .870E-01 265 70 301 1 .900E-01 317 83 301 1 .820E-01 211 57 58 1 .146E+01 267 71 72 1 .115E+01 319 84 85 1 .146E+01 212 57 201 4 .373E+00 268 71 215 4 .473E+00 322 84 301 1 .800E-01 211 57 58 1 .146E+01 267 71 72 1 .115E+01 323 85 86 1 .146E+01 267 71 72 1 .115E+01 329 86 301 1 .800E-01 214 57 301 1 .800E-01 269 71 301 1 .157E+00 328 86 230 4 .373E+00 212 57 80 301 1 .800E-01 270 71 301 1 .138E+00 328 86 230 4 .373E+00 212 57 80 301 1 .800E-01 270 71 301 1 .138E+00 328 86 230 4 .373E+00 212 57 80 301 1 .800E-01 270 71 301 1 .138E+00 328 86 230 4 .373E+00 217 58 301 1 .800E-01 270 71 301 1 .138E+00 328 86 230 1 1 .800E-01 270 71 301 1 .138E+00 328 86 230 4 .373E+00 217 58 301 1 .800E-01 270 71 301 1 .138E+00 328 86 230 1 1 .800E-01 270 71 301 1 .138E+00 328 86 230 1 1 .800E-01 270 71 301 1 .138E+00 328 86 230 1 1 .800E-01 270 71 301 1 .138E+00 328 86 230 1 1 .800E-01 270 71 301 1 .138E+00 328 86 230 1 1 .800E-01 270 71 301 1 .1380E-01 330 88 301 1 .800E-01 270 71 301 1 .300E-01 330													1	.930E-01
195 53 54 1 .146E+01 251 67 68 1 .210E+01 307 81 82 1 .146E+01 196 53 197 4 .373E+00 252 67 211 4 .288E+00 308 81 225 4 .373E+00 197 53 301 1 .830E-01 253 67 301 1 .930E-01 309 81 301 1 .840E-01 198 53 301 1 .830E-01 254 67 301 1 .125E+00 310 81 301 1 .840E-01 199 54 55 1 .146E+01 255 68 69 1 .125E+01 311 82 83 1 .146E+01 200 54 198 4 .373E+00 256 68 212 4 .348E+00 312 82 226 4 .373E+00 201 54 301 1 .830E-01 257 68 301 1 .990E-01 313 82 301 1 .850E-01 202 54 301 1 .830E-01 258 68 301 1 .172E+00 314 82 301 1 .850E-01 203 55 56 1 .146E+01 259 69 70 1 .120E+01 315 83 84 1 .146E+01 204 55 199 4 .373E+00 260 69 213 4 .348E+00 316 83 227 4 .373E+00 205 55 301 1 .870E-01 261 69 301 1 .990E-01 317 83 301 1 .820E-01 206 55 301 1 .830E-01 262 69 301 1 .171E+00 318 83 301 1 .820E-01 207 56 57 1 .146E+01 263 70 71 1 .115E+01 319 84 85 1 .146E+01 208 56 200 4 .373E+00 265 70 301 1 .900E-01 321 84 301 1 .820E-01 209 56 301 1 .870E-01 265 70 301 1 .900E-01 321 84 301 1 .820E-01 21 57 58 1 .146E+01 267 71 72 1 .115E+01 319 84 85 1 .146E+01 21 57 201 4 .373E+00 268 71 215 4 .473E+00 322 84 301 1 .820E-01 215 57 201 4 .373E+00 268 71 215 4 .473E+00 324 85 229 4 .373E+00 213 57 301 1 .820E-01 269 71 301 1 .15E+01 323 85 86 1 .146E+01 215 58 202 4 .373E+00 268 71 215 4 .473E+00 328 86 230 4 .373E+00 215 58 202 4 .373E+00 268 71 215 4 .473E+00 328 86 230 4 .373E+00 215 58 202 4 .373E+00 272 72 216 4 .473E+00 328 86 230 4 .373E+00 215 58 202 4 .373E+00 272 72 216 4 .473E+00 328 86 230 4 .373E+00 217 58 301 1 .860E-01 273 72 301 1 .330E-01 329 86 301 1 .820E-01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 222 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-01 222 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-01 222 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-01 222 59				-										.910E-01
196 53 197 4 .373E+00 252 67 211 4 .288E+00 308 81 225 4 .373E+00 198 53 301 1 .870E-01 253 67 301 1 .930E-01 310 81 301 1 .840E-01 299 54 55 1 .146E+01 255 68 69 1 .125E+01 311 82 83 1 .146E+01 200 54 198 4 .373E+00 256 68 212 4 .348E+00 312 82 226 4 .373E+00 201 54 301 1 .870E-01 257 68 301 1 .990E-01 313 82 301 1 .850E-01 202 54 301 1 .830E-01 258 68 301 1 .172E+00 314 82 301 1 .820E-01 203 55 56 1 .146E+01 259 69 70 1 .120E+01 315 83 84 1 .146E+01 204 55 199 4 .373E+00 260 69 213 4 .348E+00 316 83 227 4 .373E+00 205 55 301 1 .870E-01 261 69 301 1 .990E-01 317 83 301 1 .820E-01 207 56 57 1 .146E+01 263 70 71 1 .115E+01 319 84 85 1 .146E+01 208 56 200 4 .373E+00 264 70 214 4 .473E+00 320 84 228 4 .373E+00 209 56 301 1 .870E-01 265 70 301 1 .900E-01 318 83 301 1 .820E-01 210 56 301 1 .820E-01 267 70 71 1.155E+01 329 84 85 1 .146E+01 263 70 71 1 .155E+01 329 84 85 1 .146E+01 263 70 71 1 .155E+01 329 84 85 1 .146E+01 263 70 71 1 .155E+01 329 84 85 1 .146E+01 263 70 71 1 .155E+01 329 84 85 1 .146E+01 267 71 72 1 .155E+01 323 85 86 1 .146E+01 267 71 72 1 .155E+01 323 85 86 1 .146E+01 267 71 72 1 .155E+01 323 85 86 1 .146E+01 267 71 72 73 1 .155E+01 329 86 87 1 .146E+01 267 71 72 73 1 .155E+01 329 86 87 1 .146E+01 277 73 301 1 .820E-01 279 73 301 1 .820E-01 279 74 75 1 .115E+01 333 87 88 1 .146E+01 279 79 74 75 1 .115E+01 334 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .820E-01 278 73 301 1 .820E-01 279 79 74 75 1 .115E+01 334 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .670E-01 333 87 301 1 .860E-01 279 79 74 75 1 .115E+01 335 88 89 1 .146E+01 222 59 301 1 .820E-01 278 73 301 1 .670E-01 333 87 301 1 .860E-01 279 79 74 75 1 .115E+01 335 88 89 1 .146E+01 222 59 301 1 .820E-01 278 73 301 1 .670E-01 334 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .670E-01 333 87 301 1 .860E-01 222 59 301 1 .820E-01 278 73 301 1 .670E-01 333 87 301 1 .860E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .860E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .860E-01 222 59 301 1 .820E-0									1				1	.146E+01
197 53 301 1 .870E-01 253 67 301 1 .930E-01 309 81 301 1 .840E-01 198 53 301 1 .830E-01 255 68 69 1 .125E+00 310 81 301 1 .830E-01 200 54 198 4 .373E+00 256 68 212 4 .348E+00 312 82 226 4 .373E+00 201 54 301 1 .830E-01 257 68 301 1 .990E-01 313 82 301 1 .850E-01 202 54 301 1 .830E-01 258 68 301 1 .172E+00 314 82 301 1 .850E-01 203 55 56 1 .146E+01 259 69 70 1 .120E+01 315 83 84 1 .146E+01 204 55 199 4 .373E+00 260 69 213 4 .348E+00 316 83 227 4 .373E+00 205 55 301 1 .870E-01 261 69 301 1 .990E-01 315 83 227 4 .373E+00 205 55 301 1 .870E-01 261 69 301 1 .990E-01 317 83 301 1 .850E-01 206 55 301 1 .830E-01 262 69 301 1 .171E+00 318 83 301 1 .850E-01 207 56 57 1 .146E+01 263 70 71 1 .115E+01 319 84 85 1 .146E+01 208 56 200 4 .373E+00 264 70 214 4 .473E+00 320 84 228 4 .373E+00 209 56 301 1 .870E-01 265 70 301 1 .900E-01 321 84 301 1 .860E-01 210 56 301 1 .820E-01 266 70 301 1 .157E+00 322 84 301 1 .820E-01 213 57 301 1 .820E-01 267 71 72 1 .115E+01 323 85 86 1 .146E+01 213 57 301 1 .820E-01 267 71 72 1 .115E+01 323 85 86 1 .146E+01 213 57 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 213 57 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 215 58 59 1 .146E+01 271 72 73 1 .115E+01 329 86 301 1 .820E-01 215 58 59 1 .146E+01 271 72 73 1 .115E+01 329 86 301 1 .820E-01 215 58 301 1 .820E-01 273 72 301 1 .330E-01 329 86 301 1 .820E-01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 328 86 301 1 .820E-01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 328 86 301 1 .820E-01 275 73 74 1 .115E+01 333 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .670E-01 333 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 333 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 333 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 333 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 333 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 333 87 301 1 .420E-01 222 59 301 1 .820E-0									1				4	.373E+00
198 53 301			-								81		1	.840E-01
199 54 55 1 .146E+01 255 68 69 1 .125E+01 311 82 83 1 .146E+01 200 54 198 4 .373E+00 256 68 212 4 .348E+00 312 82 226 4 .373E+00 201 54 301 1 .870E-01 257 68 301 1 .990E-01 313 82 301 1 .850E-01 202 54 301 1 .830E-01 258 68 301 1 .172E+00 314 82 301 1 .850E-01 203 55 56 1 .146E+01 259 69 70 1 .120E+01 315 83 84 1 .146E+01 204 55 199 4 .373E+00 260 69 213 4 .348E+00 316 83 227 4 .373E+00 205 55 301 1 .870E-01 261 69 301 1 .990E-01 317 83 301 1 .850E-01 206 55 301 1 .830E-01 262 69 301 1 .171E+00 318 83 301 1 .820E-01 207 56 57 1 .146E+01 263 70 71 1 .115E+01 319 84 85 1 .146E+01 208 56 200 4 .373E+00 264 70 214 4 .473E+00 320 84 228 4 .373E+00 209 56 301 1 .870E-01 265 70 301 1 .900E-01 321 84 301 1 .820E-01 210 56 301 1 .820E-01 266 70 301 1 .900E-01 321 84 301 1 .820E-01 211 57 58 1 .146E+01 267 71 72 1 .115E+01 323 85 86 1 .146E+01 212 57 201 4 .373E+00 268 71 215 4 .473E+00 324 85 229 4 .373E+00 214 57 301 1 .860E-01 269 71 301 1 .710E-01 325 85 301 1 .820E-01 215 58 59 1 .146E+01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 215 58 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 215 58 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 215 58 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 215 58 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 215 58 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 215 58 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 215 58 301 1 .820E-01 270 72 301 1 .330E-01 329 86 301 1 .820E-01 273 72 301 1 .330E-01 329 86 301 1 .820E-01 273 72 301 1 .300E-01 330 86 301 1 .820E-01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 275 73 74 1 .115E+01 333 87 301 1 .820E-01 275 73 74 1 .115E+01 333 87 301 1 .820E-01 275 73 74 1 .115E+01 333 87 301 1 .820E-01 275 73 74 1 .115E+01 333 87 301 1 .820E-01 275 73 74 1 .115E+01 333 87 301 1 .820E-01 275 73 74 1 .115E+01 333 87 301 1 .820E-01 275 73 74 1 .115E+01 333 87 301 1 .820E-01 275 73 74 1 .115E+01 333 87 301 1 .820E-01 275 73 301 1 .670E-01 333													1	.830E-01
200 54 198 4 .373E+00 256 68 212 4 .348E+00 312 82 226 4 .373E+00 201 54 301 1 .870E-01 257 68 301 1 .990E-01 313 82 301 1 .850E-01 203 55 56 1 .146E+01 259 69 70 1 .120E+01 315 83 84 1 .146E+01 204 55 199 4 .373E+00 260 69 213 4 .348E+00 316 83 227 4 .373E+00 205 55 301 1 .870E-01 261 69 301 1 .990E-01 317 83 301 1 .850E-01 206 55 301 1 .870E-01 262 69 301 1 .171E+00 318 83 301 1 .850E-01 206 55 301 1 .870E-01 262 69 301 1 .171E+00 318 83 301 1 .850E-01 208 56 200 4 .373E+00 264 70 214 4 .473E+00 320 84 228 4 .373E+00 209 56 301 1 .870E-01 265 70 301 1 .990E-01 317 83 301 1 .860E-01 209 56 301 1 .870E-01 266 70 301 1 .900E-01 321 84 301 1 .820E-01 210 56 301 1 .820E-01 266 70 301 1 .157E+00 322 84 301 1 .820E-01 211 57 58 1 .146E+01 267 71 72 1 .115E+01 323 85 86 1 .146E+01 212 57 201 4 .373E+00 268 71 215 4 .473E+00 324 85 229 4 .373E+00 213 57 301 1 .860E-01 269 71 301 1 .710E-01 325 85 301 1 .820E-01 214 57 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 215 58 59 1 .146E+01 271 72 73 1 .115E+01 329 86 301 1 .820E-01 215 58 59 1 .146E+01 271 72 73 1 .115E+01 329 86 301 1 .820E-01 215 58 301 1 .860E-01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 215 58 301 1 .860E-01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 215 58 301 1 .860E-01 270 71 301 1 .15E+01 329 86 301 1 .820E-01 215 58 301 1 .860E-01 270 72 216 4 .473E+00 328 86 230 4 .373E+00 217 58 301 1 .860E-01 273 72 301 1 .330E-01 329 86 301 1 .820E-01 218 58 301 1 .860E-01 273 72 301 1 .30E-01 332 87 331 4 .373E+00 220 59 203 4 .373E+00 276 73 217 4 .473E+00 328 86 301 1 .820E-01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 328 86 301 1 .820E-01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 328 86 301 1 .820E-01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 301 1 .820E-01 277 73 301 1 .670E-01 333 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 333 87 301 1 .820E-01 223 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 223 60 61 1 .146E+01												83	1	.146E+01
201 54 301 1 .870E-01 257 68 301 1 .990E-01 313 82 301 1 .820E-01 203 55 56 1 .146E+01 259 69 70 1 .120E+01 315 83 84 1 .146E+01 204 55 199 4 .373E+00 260 69 213 4 .348E+00 316 83 227 4 .373E+00 205 55 301 1 .870E-01 261 69 301 1 .990E-01 317 83 301 1 .850E-01 206 55 301 1 .830E-01 262 69 301 1 .171E+00 318 83 301 1 .820E-01 207 56 57 1 .146E+01 263 70 71 1 .115E+01 319 84 85 1 .146E+01 208 56 200 4 .373E+00 264 70 214 4 .473E+00 320 84 228 4 .373E+00 209 56 301 1 .870E-01 265 70 301 1 .900E-01 321 84 301 1 .820E-01 210 56 301 1 .820E-01 266 70 301 1 .157E+00 322 84 301 1 .820E-01 210 56 301 1 .820E-01 266 70 301 1 .157E+00 322 84 301 1 .820E-01 210 57 301 1 .860E-01 267 71 72 1 .115E+01 323 85 86 1 .146E+03 212 57 201 4 .373E+00 268 71 215 4 .473E+00 324 85 229 4 .373E+00 213 57 301 1 .860E-01 269 71 301 1 .138E+00 324 85 229 4 .373E+00 214 57 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 270 71 301 1 .138E+00 328 86 230 4 .373E+00 272 72 216 4 .473E+00 328 86 230 4 .373E+00 272 72 216 4 .473E+00 328 86 230 4 .373E+00 272 72 216 4 .473E+00 328 86 230 4 .373E+00 272 72 216 4 .473E+00 328 86 230 4 .373E+00 272 72 301 1 .330E-01 329 86 301 1 .820E-01 273 72 301 1 .330E-01 329 86 301 1 .820E-01 274 72 301 1 .670E-01 333 87 88 1 .146E+03 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 220 59 203 4 .373E+00 276 73 217 4 .473E+00 338 87 301 1 .820E-01 275 73 74 1 .115E+01 333 87 301 1 .820E-01 275 73 74 1 .115E+01 333 87 301 1 .820E-01 275 73 74 1 .115E+01 333 87 301 1 .820E-01 275 73 74 1 .115E+01 333 87 301 1 .820E-01 275 73 74 1 .115E+01 334 87 301 1 .820E-01 275 73 74 1 .115E+01 333 87 301 1 .820E-01 275 73 74 1 .115E+01 334 87 301 1 .820E-01 275 73 74 1 .115E+01 334 87 301 1 .820E-01 275 73 74 1 .115E+01 334 87 301 1 .820E-01 275 73 74 1 .115E+01 335 88 89 1 .146E+03 205 205 205 205 205 205 205 205 205 205			_						1	312	82	226	4	.373E+00
202 54 301 1 .830E-01 258 68 301 1 .172E+00 314 82 301 1 .820E-01 203 55 56 1 .146E+01 259 69 70 1 .120E+01 315 83 84 1 .146E+01 204 55 199 4 .373E+00 260 69 213 4 .348E+00 316 83 227 4 .373E+00 205 55 301 1 .870E-01 261 69 301 1 .990E-01 317 83 301 1 .850E-01 206 55 301 1 .830E-01 262 69 301 1 .171E+00 318 83 301 1 .820E-01 207 56 57 1 .146E+01 263 70 71 1 .115E+01 319 84 85 1 .146E+01 208 56 200 4 .373E+00 264 70 214 4 .473E+00 320 84 228 4 .373E+00 209 56 301 1 .870E-01 265 70 301 1 .900E-01 321 84 301 1 .820E-01 210 56 301 1 .820E-01 266 70 301 1 .900E-01 321 84 301 1 .820E-01 211 57 58 1 .146E+01 267 71 72 1 .115E+01 323 85 86 1 .146E+01 212 57 201 4 .373E+00 268 71 215 4 .473E+00 322 84 301 1 .820E-01 213 57 301 1 .820E-01 269 71 301 1 .710E-01 325 85 301 1 .820E-01 214 57 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 215 58 59 1 .146E+01 271 72 73 1 .115E+01 327 86 87 1 .146E+01 215 58 202 4 .373E+00 272 72 216 4 .473E+00 328 86 230 4 .373E+00 217 58 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 215 58 301 1 .820E-01 270 71 301 1 .138E+00 328 86 230 4 .373E+00 217 58 301 1 .820E-01 270 72 216 4 .473E+00 328 86 230 4 .373E+00 217 58 301 1 .820E-01 273 72 301 1 .330E-01 329 86 301 1 .820E-01 218 58 301 1 .820E-01 273 72 301 1 .330E-01 329 86 301 1 .820E-01 219 59 60 1 .146E+01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 331 4 .373E+00 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 301 1 .820E-03 220 59 301 1 .820E-01 277 73 301 1 .670E-01 333 87 301 1 .820E-03 220 59 301 1 .820E-01 277 73 301 1 .670E-01 333 87 301 1 .820E-03 220 59 301 1 .820E-01 277 73 301 1 .670E-01 334 87 301 1 .820E-03 220 59 301 1 .820E-01 277 73 301 1 .670E-01 334 87 301 1 .820E-03 220 59 301 1 .820E-01 277 73 301 1 .670E-01 334 87 301 1 .820E-03 220 59 301 1 .8												301	1	.850E-01
203 55 56 1 .146E+01 259 69 70 1 .120E+01 315 83 84 1 .146E+01 204 55 199 4 .373E+00 260 69 213 4 .348E+00 316 83 227 4 .373E+00 205 55 301 1 .870E-01 261 69 301 1 .990E-01 317 83 301 1 .850E-01 206 55 301 1 .830E-01 262 69 301 1 .171E+00 318 83 301 1 .820E-01 207 56 57 1 .146E+01 263 70 71 1 .115E+01 319 84 85 1 .146E+01 208 56 200 4 .373E+00 264 70 214 4 .473E+00 320 84 228 4 .373E+00 209 56 301 1 .870E-01 265 70 301 1 .900E-01 321 84 301 1 .860E-01 210 56 301 1 .820E-01 266 70 301 1 .157E+00 322 84 301 1 .820E-01 211 57 58 1 .146E+01 267 71 72 1 .115E+01 323 85 86 1 .146E+01 212 57 201 4 .373E+00 268 71 215 4 .473E+00 324 85 229 4 .373E+00 213 57 301 1 .860E-01 269 71 301 1 .710E-01 325 85 301 1 .860E-01 214 57 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .860E-01 215 58 59 1 .146E+01 271 72 73 1 .115E+01 327 86 87 1 .146E+03 215 58 59 1 .146E+01 271 72 73 1 .115E+01 327 86 87 1 .146E+03 216 58 202 4 .373E+00 272 72 216 4 .473E+00 328 86 230 4 .373E+00 218 58 301 1 .860E-01 273 72 301 1 .330E-01 329 86 301 1 .820E-03 219 59 60 1 .146E+01 275 73 74 1 .115E+01 327 86 87 1 .146E+03 219 59 60 1 .146E+01 275 73 74 1 .115E+01 331 87 88 1 .146E+03 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 221 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-03 221 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-03 221 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-03 222 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-03 222 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-03 222 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .820E-03 222 59 301 1 .820E-01 278 73 301 1 .670E-01 334 87 301 1 .820E-03 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-03 223 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1			_										1	.820E-01
204 55 199 4 .373E+00 260 69 213 4 .348E+00 316 83 227 4 .373E+00 205 55 301 1 .870E-01 261 69 301 1 .990E-01 317 83 301 1 .850E-01 207 56 57 1 .146E+01 263 70 71 1 .115E+01 319 84 85 1 .146E+01 208 56 200 4 .373E+00 264 70 214 4 .473E+00 320 84 228 4 .373E+00 209 56 301 1 .870E-01 265 70 301 1 .900E-01 321 84 301 1 .860E-01 210 56 301 1 .820E-01 266 70 301 1 .157E+00 322 84 301 1 .820E-01 211 57 58 1 .146E+01 267 71 72 1 .115E+01 323 85 86 1 .146E+01 212 57 201 4 .373E+00 268 71 215 4 .473E+00 324 85 229 4 .373E+00 213 57 301 1 .820E-01 269 71 301 1 .710E-01 325 85 301 1 .820E-01 215 58 59 1 .146E+01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 215 58 59 1 .146E+01 271 72 73 1 .115E+01 327 86 87 1 .146E+01 216 58 202 4 .373E+00 272 72 216 4 .473E+00 328 86 230 4 .373E+00 217 58 301 1 .820E-01 273 72 301 1 .330E-01 329 86 301 1 .820E-01 219 59 60 1 .146E+01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 220 59 301 1 .820E-01 278 73 301 1 .670E-01 333 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .670E-01 333 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 222 59 301 1 .820E-01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 223 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 223 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 223 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 223 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 223 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 60 61 1 .146E+01 279 74 75													1	.146E+01
205 55 301 1 .870E-01 261 69 301 1 .990E-01 317 83 301 1 .820E-01 207 56 57 1 .146E+01 263 70 71 1 .115E+01 319 84 85 1 .146E+01 208 56 200 4 .373E+00 264 70 214 4 .473E+00 320 84 228 4 .373E+00 209 56 301 1 .820E-01 265 70 301 1 .900E-01 321 84 301 1 .820E-01 210 56 301 1 .820E-01 266 70 301 1 .157E+00 322 84 301 1 .820E-01 211 57 58 1 .146E+01 267 71 72 1 .115E+01 323 85 86 1 .146E+01 212 57 201 4 .373E+00 268 71 215 4 .473E+00 324 85 229 4 .373E+00 213 57 301 1 .860E-01 269 71 301 1 .710E-01 325 85 301 1 .860E-01 214 57 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .860E-01 215 58 59 1 .146E+01 271 72 73 1 .115E+01 327 86 87 1 .146E+01 215 58 59 1 .146E+01 271 72 73 1 .115E+01 327 86 87 1 .146E+01 215 58 301 1 .820E-01 270 71 301 1 .330E-01 329 86 301 1 .820E-01 218 58 301 1 .820E-01 274 72 301 1 .330E-01 329 86 301 1 .820E-01 218 58 301 1 .820E-01 274 72 301 1 .330E-01 329 86 301 1 .820E-01 218 58 301 1 .820E-01 274 72 301 1 .330E-01 329 86 301 1 .820E-01 219 59 60 1 .146E+01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 318 87 301 1 .820E-01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 318 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .670E-01 333 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 301 1 .46E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 301 1 .46E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 301 1 .46E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 301 1 .46E+01 220 59 301 1 .46E+01 220 59 301											83	227	4	.373E+00
206 55 301 1 .830E-01 262 69 301 1 .171E+00 318 83 301 1 .820E-01 207 56 57 1 .146E+01 263 70 71 1 .115E+01 319 84 85 1 .146E+01 208 56 200 4 .373E+00 264 70 214 4 .473E+00 320 84 228 4 .373E+00 209 56 301 1 .870E-01 265 70 301 1 .900E-01 321 84 301 1 .860E-01 210 56 301 1 .820E-01 266 70 301 1 .157E+00 322 84 301 1 .820E-01 211 57 58 1 .146E+01 267 71 72 1 .115E+01 323 85 86 1 .146E+01 212 57 201 4 .373E+00 268 71 215 4 .473E+00 324 85 229 4 .373E+00 213 57 301 1 .860E-01 269 71 301 1 .710E-01 325 85 301 1 .860E-01 214 57 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .860E-01 215 58 59 1 .146E+01 271 72 73 1 .115E+01 327 86 87 1 .146E+01 215 58 59 1 .146E+01 271 72 73 1 .115E+01 327 86 87 1 .146E+01 216 58 202 4 .373E+00 272 72 216 4 .473E+00 328 86 230 4 .373E+00 217 58 301 1 .860E-01 273 72 301 1 .330E-01 329 86 301 1 .860E-01 218 58 301 1 .820E-01 274 72 301 1 .330E-01 329 86 301 1 .820E-01 219 59 60 1 .146E+01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 221 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-01 222 59 301 1 .820E-01 278 73 301 1 .670E-01 333 87 301 1 .860E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 223 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 301 1 .46E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 301 1 .46E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 301 1 .46E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 301 1 .46E+01 220 59 301 1													1	.850E-01
207 56 57 1 .146E+01 263 70 71 1 .115E+01 319 84 85 1 .146E+01 208 56 200 4 .373E+00 264 70 214 4 .473E+00 320 84 228 4 .373E+00 209 56 301 1 .870E-01 265 70 301 1 .900E-01 321 84 301 1 .860E-01 210 56 301 1 .820E-01 266 70 301 1 .157E+00 322 84 301 1 .820E-01 211 57 58 1 .146E+01 267 71 72 1 .115E+01 323 85 86 1 .146E+01 212 57 201 4 .373E+00 268 71 215 4 .473E+00 324 85 229 4 .373E+00 213 57 301 1 .860E-01 269 71 301 1 .710E-01 325 85 301 1 .860E-01 214 57 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 215 58 59 1 .146E+01 271 72 73 1 .115E+01 327 86 87 1 .146E+01 215 58 202 4 .373E+00 272 72 216 4 .473E+00 328 86 230 4 .373E+00 217 58 301 1 .860E-01 273 72 301 1 .330E-01 329 86 301 1 .820E-01 218 58 301 1 .820E-01 274 72 301 1 .30E-01 329 86 301 1 .820E-01 219 59 60 1 .146E+01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 221 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-01 225 59 301 1 .820E-01 278 73 301 1 .670E-01 333 87 301 1 .860E-01 225 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 225 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 203 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 203 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 203 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 301 1 .46E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 301 1 .46E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 301 1 .46E+01 220 59 301 1 .46E+01 220 59 301 1 .46E+01 220 59 301 1 .46									1				1	.820E-01
208 56 200 4 .373E+00 264 70 214 4 .473E+00 320 84 228 4 .373E+00 209 56 301 1 .870E-01 265 70 301 1 .900E-01 321 84 301 1 .860E-01 210 56 301 1 .820E-01 266 70 301 1 .157E+00 322 84 301 1 .820E-01 211 57 58 1 .146E+01 267 71 72 1 .115E+01 323 85 86 1 .146E+01 212 57 201 4 .373E+00 268 71 215 4 .473E+00 324 85 229 4 .373E+00 213 57 301 1 .860E-01 269 71 301 1 .710E-01 325 85 301 1 .860E-01 214 57 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 215 58 59 1 .146E+01 271 72 73 1 .115E+01 327 86 87 1 .146E+01 215 58 202 4 .373E+00 272 72 216 4 .473E+00 328 86 230 4 .373E+00 217 58 301 1 .860E-01 273 72 301 1 .330E-01 329 86 301 1 .860E-01 218 58 301 1 .820E-01 274 72 301 1 .300E-01 329 86 301 1 .820E-01 219 59 60 1 .146E+01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 328 87 231 4 .373E+00 221 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 221 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 223 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 23 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 23 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 23 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 220 59 301 1 .82	•											85	1	.146E+01
209 56 301 1 .870E-01 265 70 301 1 .900E-01 321 84 301 1 .860E-01 210 56 301 1 .820E-01 266 70 301 1 .157E+00 322 84 301 1 .820E-01 211 57 58 1 .146E+01 267 71 72 1 .115E+01 323 85 86 1 .146E+01 212 57 201 4 .373E+00 268 71 215 4 .473E+00 324 85 229 4 .373E+00 213 57 301 1 .860E-01 269 71 301 1 .710E-01 325 85 301 1 .860E-01 214 57 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 215 58 59 1 .146E+01 271 72 73 1 .115E+01 327 86 87 1 .146E+01 216 58 202 4 .373E+00 272 72 216 4 .473E+00 328 86 230 4 .373E+00 217 58 301 1 .820E-01 273 72 301 1 .330E-01 329 86 301 1 .860E-01 218 58 301 1 .820E-01 274 72 301 1 .670E-01 330 86 301 1 .820E-01 219 59 60 1 .146E+01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 221 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-01 225 59 301 1 .820E-01 278 73 301 1 .670E-01 333 87 301 1 .860E-01 225 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 225 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 225 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 221 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 236 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 236 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 236 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 301 1 .46E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 301 1 .46E+01 220 59 301 1 .4				1							84	228	4	.373E+00
210 56 301 1 .820E-01 266 70 301 1 .157E+00 322 84 301 1 .820E-01 211 57 58 1 .146E+01 267 71 72 1 .115E+01 323 85 86 1 .146E+01 212 57 201 4 .373E+00 268 71 215 4 .473E+00 324 85 229 4 .373E+00 213 57 301 1 .860E-01 269 71 301 1 .710E-01 325 85 301 1 .860E-01 214 57 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 215 58 59 1 .146E+01 271 72 73 1 .115E+01 327 86 87 1 .146E+01 216 58 202 4 .373E+00 272 72 216 4 .473E+00 328 86 230 4 .373E+00 217 58 301 1 .820E-01 273 72 301 1 .330E-01 329 86 301 1 .860E-01 218 58 301 1 .820E-01 274 72 301 1 .330E-01 329 86 301 1 .820E-01 219 59 60 1 .146E+01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 328 87 231 4 .373E+00 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 221 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-01 275 73 301 1 .670E-01 333 87 301 1 .860E-01 275 73 301 1 .670E-01 333 87 301 1 .860E-01 275 73 301 1 .670E-01 333 87 301 1 .860E-01 275 73 301 1 .670E-01 333 87 301 1 .860E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 223 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 223 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88			-								84	301	1	.860E-01
211 57 58 1 .146E+01 267 71 72 1 .115E+01 323 85 86 1 .146E+01 212 57 201 4 .373E+00 268 71 215 4 .473E+00 324 85 229 4 .373E+00 213 57 301 1 .860E-01 269 71 301 1 .710E-01 325 85 301 1 .860E-01 214 57 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 215 58 59 1 .146E+01 271 72 73 1 .115E+01 327 86 87 1 .146E+01 216 58 202 4 .373E+00 272 72 216 4 .473E+00 328 86 230 4 .373E+00 217 58 301 1 .860E-01 273 72 301 1 .330E-01 329 86 301 1 .860E-01 218 58 301 1 .820E-01 274 72 301 1 .330E-01 329 86 301 1 .820E-01 219 59 60 1 .146E+01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 328 87 231 4 .373E+00 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 221 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-01 275 73 301 1 .670E-01 333 87 301 1 .860E-01 275 73 301 1 .310E-01 334 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 223 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 221 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 236 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 236 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 236 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 236 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 236 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 236 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 236 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 236 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 236 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 236 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 236 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 60 61 20 60 61 20 60 61 20 60 61 20 60 61 20 60 61 20 60 61 20 60 61 20 60											84		1	.820E-01
212 57 201 4 .373E+00 268 71 215 4 .473E+00 324 85 229 4 .373E+00 213 57 301 1 .860E-01 269 71 301 1 .710E-01 325 85 301 1 .860E-01 214 57 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 215 58 59 1 .146E+01 271 72 73 1 .115E+01 327 86 87 1 .146E+01 216 58 202 4 .373E+00 272 72 216 4 .473E+00 328 86 230 4 .373E+00 217 58 301 1 .820E-01 273 72 301 1 .330E-01 329 86 301 1 .820E-01 218 58 301 1 .820E-01 274 72 301 1 .670E-01 330 86 301 1 .820E-01 219 59 60 1 .146E+01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 328 87 231 4 .373E+00 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 221 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-03 222 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 229 74 75 1 .115E+01 335 88 89 1 .146E+01 229 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 203 4 .346E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89		-							t t	323	85	86	1	.146E+01
213 57 301 1 .860E-01 269 71 301 1 .710E-01 325 85 301 1 .860E-01 214 57 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 215 58 59 1 .146E+01 271 72 73 1 .115E+01 327 86 87 1 .146E+01 216 58 202 4 .373E+00 272 72 216 4 .473E+00 328 86 230 4 .373E+00 217 58 301 1 .860E-01 273 72 301 1 .330E-01 329 86 301 1 .820E-01 218 58 301 1 .820E-01 274 72 301 1 .670E-01 330 86 301 1 .820E-01 219 59 60 1 .146E+01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 221 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 223 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 23 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 279 74 75 1 .115E+0		-							1		85	229	4	.373E+00
214 57 301 1 .820E-01 270 71 301 1 .138E+00 326 85 301 1 .820E-01 215 58 59 1 .146E+01 271 72 73 1 .115E+01 327 86 87 1 .146E+01 216 58 202 4 .373E+00 272 72 216 4 .473E+00 328 86 230 4 .373E+00 217 58 301 1 .860E-01 273 72 301 1 .330E-01 329 86 301 1 .860E-01 218 58 301 1 .820E-01 274 72 301 1 .670E-01 330 86 301 1 .820E-01 219 59 60 1 .146E+01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 221 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 223 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 220 59 301 1 .820E-01 278 73 301 1 .310E-01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 279 374 375 1 .115E+01 335 88 89 1 .146E+01 279 374 375 1 .115E+01 335 88 89 1 .146E+01 279 374 375 1 .115E+01 335 88 89 1 .146E+01 279 374 375 1 .115E+01 335 88 89 1 .146E+01 279 374 375 1 .115E+01 335 88 89 1 .146E+01 279 374 375 1 .115E+01 335 88 89 1 .146E+01 279 374 375 1 .115E+01 335 88 89 1 .146E+01 279 374 375 1 .115E+01 335 88 89 1 .146E+01 279 374 375 1 .115E+01 335 88 89 1 .146E+01 279 374 375 1 .115E+01 335 88 89 1 .146E+01 279 374 375 1 .115E+01 335 88 89 1 .146E+01 279 374 375 1 .115E+01 335 88 89 1 .146E+01 279 374 375 1 .115E+01 335 88 89 1 .146E+01 279 374 375 1 .115E+01 335 88 89 1 .146E+01 279 374 375 1 .115E+01 335 88 89 1 .146E+01 279 374 375 1 .115E+01 335 88 89 1 .146E+01 279 374 375 1 .115E+01 335 88 89 1 .146E+01 279 374 375 1 .115E+01 335 88 89 1 .146E+01 279 374 375 1 .115E+01 335 88 89 1			_								85	301	1	.860E-01
215 58 59 1 .146E+01 271 72 73 1 .115E+01 327 86 87 1 .146E+01 216 58 202 4 .373E+00 272 72 216 4 .473E+00 328 86 230 4 .373E+00 217 58 301 1 .860E-01 273 72 301 1 .330E-01 329 86 301 1 .860E-01 218 58 301 1 .820E-01 274 72 301 1 .670E-01 330 86 301 1 .820E-01 219 59 60 1 .146E+01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 221 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 223 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01 229 74 75 1 .115E+01 335 88 89 1 .146E+01											85	301	1	.820E-01
216 58 202 4 .373E+00 272 72 216 4 .473E+00 328 86 230 4 .373E+00 217 58 301 1 .860E-01 273 72 301 1 .330E-01 329 86 301 1 .860E-01 218 58 301 1 .820E-01 274 72 301 1 .670E-01 330 86 301 1 .820E-01 219 59 60 1 .146E+01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 221 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 223 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01								1		327	86	87		.146E+01
217 58 301 1 .860E-01 273 72 301 1 .330E-01 329 86 301 1 .860E-01 218 58 301 1 .820E-01 274 72 301 1 .670E-01 330 86 301 1 .820E-01 219 59 60 1 .146E+01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 221 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 223 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01				1				4		328	86	230	4	.373E+00
218 58 301 1 .820E-01 274 72 301 1 .670E-01 330 86 301 1 .820E-01 219 59 60 1 .146E+01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 221 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 223 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01				,							86	301	1	.860E-01
219 59 60 1 .146E+01 275 73 74 1 .115E+01 331 87 88 1 .146E+01 220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 221 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 223 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01													1	.820E-01
220 59 203 4 .373E+00 276 73 217 4 .473E+00 332 87 231 4 .373E+00 221 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 223 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01													1	.146E+01
221 59 301 1 .860E-01 277 73 301 1 .670E-01 333 87 301 1 .860E-01 222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 223 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01													4	.373E+00
222 59 301 1 .820E-01 278 73 301 1 .310E-01 334 87 301 1 .820E-01 223 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01													1	.860E-01
223 60 61 1 .146E+01 279 74 75 1 .115E+01 335 88 89 1 .146E+01									.310E-01		87	301	1	.820E-01
223 00 01 1 11102.01													1	.146E+01
224 60 204 4 .3/3E+00 280 /4 218 # .4/3E+00 330 66 232 4 .3/3E+00	224	60 204		.373E+00	280		218	4	.473E+00	336	88	232	4	.373E+00

```
Brnh From To Tag Conduct
                            Brnh From To Tag Conduct
                                                        Brnh From To Tag Conduct
                                           1 .900E-01
337
     88 301
               1 .850E-01
                            393 102 301
                                                        449 116 301
                                                                       1 .830E-01
338
     88 301
               1 .820E-01
                            394 103 104
                                           1 .146E+01
                                                         450 117 118
                                                                        1 .146E+01
               1 .146E+01
                                           4 .373E+00
339
     89
         90
                            395 103 247
                                                        451 117 261
                                                                       4 .373E+00
                                                                       1 .830E-01
340
     89
               4 .373E+00
        233
                            396 103 301
                                           1 .760E-01
                                                        452 117 301
341
     89 301
               1 .850E-01
                            397 103 301
                                           1 .840E-01
                                                        453 117 301
                                                                       1 .830E-01
                                           1 .146E+01
342
     89 301
               1 .810E-01
                            398 104 105
                                                        454 118 119
                                                                       1 .129E+01
343
     90
         91
               1 .146E+01
                            399 104 248
                                           4 .373E+00
                                                        455 118 262
                                                                       4 .373E+00
                                           1 .780E-01
344
     90 234
               4 .373E+00
                            400 104
                                    301
                                                                       1 .820E-01
                                                        456 118 301
345
     90 301
               1 .850E-01
                            401 104
                                    301
                                           1 .840E-01
                                                        457
                                                            118
                                                                301
                                                                       1 .840E-01
               1 .810E-01
346
     90 301
                            402 105 106
                                           1 .146E+01
                                                        458 119 120
                                                                       1 .115E+01
                                           4 .373E+00
347
     91
         92
               1 .146E+01
                            403 105 249
                                                        459 119 263
                                                                       4 .473E+00
               4 .373E+00
                                           1 .790E-01
348
     91 235
                            404 105
                                                                       1 .860E-01
                                    301
                                                        460 119 301
349
     91 301
               1 .850E-01
                            405 105
                                    301
                                           1 .830E-01
                                                        461 119
                                                                301
                                                                       1 .960E-01
350
     91 301
               1 .810E-01
                            406 106
                                    107
                                           1 .146E+01
                                                        462 120 121
                                                                       1 .115E+01
351
     92
         93
                                                                       4 .473E+00
               1 .146E+01
                            407 106
                                    250
                                           4 .373E+00
                                                        463 120 264
352
     92 236
               4 .373E+00
                            408
                                106
                                    301
                                           1 .810E-01
                                                        464 120 301
                                                                       1 .650E-01
353
     92 301
               1 .850E-01
                            409 106 301
                                           1 .830E-01
                                                        465 120 301
                                                                       1 .113E+00
354
     92 301
               1 .810E-01
                            410 107 108
                                           1 .146E+01
                                                        466 121 122
                                                                       1 .115E+01
355
     93
         94
               1 .146E+01
                            411 107 251
                                           4 .373E+00
                                                                       4 .473E+00
                                                        467 121 265
356
     93 237
               4 .373E+00
                            412
                                107
                                     301
                                           1 .820E-01
                                                        468 121 301
                                                                       1 .220E-01
357
     93 301
               1 .850E-01
                            413 107
                                    301
                                           1 .830E-01
                                                        469 121 301
                                                                       1 .133E+00
                                           1 .146E+01
358
     93 301
               1 .810E-01
                            414 108
                                    109
                                                        470 122 123
                                                                       1 .115E+01
                                                                       4 .473E+00
359
     94
         95
               1 .146E+01
                            415 108 252
                                           4 .373E+00
                                                        471 122 266
               4 .373E+00
                                           1 .840E-01
360
     94 238
                            416 108
                                    301
                                                        472 122 301
                                                                       1 .420E-01
361
     94 301
               1 .850E-01
                            417
                                108
                                    301
                                           1 .830E-01
                                                        473 123 124
                                                                       1 .115E+01
362
     94 301
               1 .810E-01
                            418 109 110
                                           1 .146E+01
                                                        474 123 267
                                                                       4 .473E+00
                                                        475 123 301
363
     95
         96
               1 .146E+01
                            419 109 253
                                           4 .373E+00
                                                                       1 .760E-01
364
     95 239
               4 .373E+00
                            420 109
                                           1 .850E-01
                                    301
                                                        476 124 125
                                                                       1 .129E+01
        301
               1 .850E-01
                                           1 .830E-01
365
     95
                            421 109
                                    301
                                                        477 124 268
                                                                       4 .473E+00
366
     95 301
               1 .810E-01
                            422 110 111
                                           1 .146E+01
                                                        478 124 301
                                                                       1 .940E-01
               1 .129E+01
367
     96
         97
                            423 110 254
                                           4 .373E+00
                                                        479 125 126
                                                                       1 .146E+01
                                           1 .850E-01
368
               4 .373E+00
     96 240
                            424 110 301
                                                        480 125 269
                                                                       4 .373E+00
369
     96
        301
               1
                .840E-01
                            425
                                110
                                    301
                                           1 .830E-01
                                                        481 125
                                                                301
                                                                       1 .490E-01
               1 .800E-01
370
                                           1 .146E+01
     96 301
                            426 111 112
                                                        482 125 301
                                                                       1 .860E-01
371
     97
         98
               1 .115E+01
                            427 111 255
                                           4 .373E+00
                                                        483 126 127
                                                                       1 .146E+01
               4 .473E+00
                                           1 .850E-01
                                                                       4 .373E+00
372
     97
        241
                            428 111 301
                                                        484 126 270
     97
373
        301
               1 .900E-01
                            429 111 301
                                           1 .830E-01
                                                        485 126 301
                                                                       1 .680E-01
374
                                                                       1 .860E-01
     97 301
               1 .930E-01
                            430 112 113
                                           1 .146E+01
                                                        486 126 301
375
                                           4 .373E+00
     98
         99
               1 .115E+01
                            431 112 256
                                                        487 127 128
                                                                       1 .146E+01
                                           1 .850E-01
376
     98 242
               4 .473E+00
                            432 112
                                    301
                                                        488 127
                                                                271
                                                                       4 .373E+00
                                           1 .830E-01
377
     98 301
                                                        489 127 301
               1 .690E-01
                            433 112 301
                                                                       1 .820E-01
378
               1 .123E+00
                                           1 .146E+01
                                                        490 127 301
                                                                       1 .850E-01
     98 301
                            434 113 114
                                                                       1 .146E+01
               1 .115E+01
                                           4 .373E+00
379
     99 100
                                                        491 128 129
                            435 113 257
380
     99
        243
               4 .473E+00
                            436
                                113
                                    301
                                           1 .850E-01
                                                        492 128
                                                                272
                                                                       4 .373E+00
                                           1 .830E-01
               1 .260E-01
                                                                       1 .910E-01
381
     99 301
                            437 113 301
                                                        493 128 301
                                           1 .146E+01
                                                                       1 .840E-01
382
     99 301
               1 .149E+00
                            438 114 115
                                                        494 128 301
               1 .115E+01
                                           4 .373E+00
                                                        495 129 130
                                                                       1 .146E+01
383 100 101
                            439 114 258
                                                                       4 .373E+00
384
    100 244
               4
                .473E+00
                            440 114 301
                                           1 .850E-01
                                                        496 129
                                                                273
                                           1 .830E-01
                                                        497 129 301
                                                                       1 .970E-01
385 100 301
               1 .380E-01
                            441 114 301
               1 .115E+01
                                           1 .146E+01
                                                        498 129 301
                                                                       1 .830E-01
386 101 102
                            442 115 116
                                           4 .373E+00
                                                                       1 .146E+01
               4 .473E+00
                                                        499 130 131
387 101 245
                            443 115 259
                                           1 .840E-01
                                                        500 130 274
                                                                       4 .373E+00
388 101 301
               1 .920E-01
                            444 115
                                    301
                            445 115 301
                                           1 .830E-01
                                                        501 130 301
                                                                       1 .100E+00
389 101 301
               1 .720E-01
               1 .129E+01
                                           1 .146E+01
                                                                       1 .830E-01
390 102 103
                                                        502 130 301
                            446 116 117
                                           4 .373E+00
                                                        503 131 132
                                                                       1 .146E+01
391 102 246
               4 .473E+00
                            447 116 260
392 102 301
               1 .124E+00
                           448 116 301
                                           1 .840E-01
                                                       504 131 275
                                                                       4 .373E+00
```

```
Brnh From To Tag Conduct| Brnh From To Tag Conduct|
                                                       Brnh From To Tag Conduct
                                          5 .790E+02
              1 .101E+00
                           561 158 157
                                                       617 214 213
                                                                      5 .790E+02
505 131 301
                           562 159 158
                                           5 .790E+02
                                                       618 215 214
               1 .830E-01
                                                                       .790E+02
506 131 301
                                          5 .790E+02
                                                       619 216 215
              1 .146E+01
                                                                      5 .790E+02
                           563 160 159
507 132 133
                           564 161 160
               4 .373E+00
                                          5 .790E+02
                                                       620 217 216
                                                                      5 .790E+02
508 132 276
                                                                      5 .790E+02
                           565 162 161
                                          5 .790E+02
                                                       621 218 217
509 132 301
              1 .100E+00
              1 .830E-01
                           566 163 162
                                          5 .790E+02
                                                       622 219 218
                                                                      5 .790E+02
510 132 301
                                                       623 220 219
                                                                      5 .790E+02
                           567 164 163
                                          5 .790E+02
511 133 134
              1 .146E+01
                           568 165 164
                                          5 .790E+02
                                                       624 221 220
                                                                      5 .790E+02
               4 .373E+00
512 133 277
              1 .970E-01
                                                                      5 .790E+02
513 133 301
                           569 166
                                    165
                                          5 .790E+02
                                                       625 222 221
                                          5 .790E+02
                                                                      5 .790E+02
              1 .830E-01
                           570 167 166
                                                       626 223 222
514 133 301
               1 .146E+01
                                          5 .790E+02
                                                       627 224 223
                                                                      5 .790E+02
                           571 168 167
515 134 135
               4 .373E+00
                                          5 .790E+02
                                                       628 225 224
                                                                      5 .790E+02
                           572 169
                                   168
516 134 278
                                          5 .790E+02
                                                                      5 .790E+02
                                                       629 226 225
              1 .910E-01
                           573 170 169
517 134 301
                                          5 .790E+02
              1 .840E-01
                           574 171 170
                                                       630 227 226
                                                                      5 .790E+02
518 134 301
                                          5 .790E+02
                                                       631 228 227
                                                                      5 .790E+02
                           575 172 171
519 135 136
               1 .146E+01
               4 .373E+00
                                          5 .790E+02
                                                       632 229 228
                                                                      5 .790E+02
                           576 173 172
520 135 279
                                          5 .790E+02
                                                       633 230 229
                                                                      5 .790E+02
               1 .820E-01
                           577 174 173
521 135
        301
                                          5 .790E+02
                                                                      5 .790E+02
               1 .840E-01
                                                       634 231 230
522 135 301
                           578 175 174
                                          5 .790E+02
                                                       635 232 231
                                                                      5 .790E+02
               1 .146E+01
                           579 176 175
523 136 137
               4 .373E+00
                           580 177
                                   176
                                          5 .790E+02
                                                       636 233 232
                                                                      5 .790E+02
524 136 280
                                          5 .790E+02
                                                       637 234 233
                                                                      5 .790E+02
               1 .680E-01
                           581 178 177
525 136 301
                                                                      5 .790E+02
               1 .860E-01
                                           5 .790E+02
                                                       638 235 234
                           582 179 178
526 136 301
                                          5 .790E+02
                                                       639 236 235
                                                                      5 .790E+02
               1 .146E+01
                           583 180 179
527 137 138
                                                                      5 .790E+02
               4 .373E+00
                                            .790E+02
                                                       640 237 236
                           584 181
                                   180
                                           5
528 137 281
                                           5 .790E+02
                                                       641 238 237
                                                                      5 .790E+02
               1 .490E-01
529 137
        301
                           585 182 181
               1 .870E-01
                           586 183 182
                                           5 .790E+02
                                                       642 239 238
                                                                      5 .790E+02
530 137 301
                                          5 .790E+02
                                                                      5 .790E+02
                                                       643 240 239
               1 .146E+01
                           587 184 183
531 138 139
                                                                      5 .790E+02
               4 .373E+00
                            588 185
                                    184
                                           5 .790E+02
                                                       644 241 240
532 138 282
                                                                      5 .790E+02
                           589 186 185
                                           5 .790E+02
                                                       645 242 241
533 138 301
               1 .240E-01
                                                                      5 .790E+02
                                          5 .790E+02
               1 .880E-01
534 138 301
                            590 187 186
                                                       646 243 242
                           591 188 187
                                           5 .790E+02
                                                       647 244 243
                                                                      5 .790E+02
               1 .146E+01
535 139 140
                                           5 .790E+02
                                                                      5 .790E+02
                                                       648 245 244
               4 .373E+00
                            592 189
                                    188
536 139 283
                                                                      5 .790E+02
                                            .790E+02
               1 .900E-01
                            593 190 189
                                                       649 246 245
537 139 301
                                           5 .790E+02
                                                       650 247 246
                                                                      5 .790E+02
              1 .160E+01
                            594 191 190
538 140 141
                                                                      5 .790E+02
               4 .373E+00
                            595 192 191
                                           5
                                            .790E+02
                                                       651 248 247
539 140 284
                                                                      5 .790E+02
                                           5 .790E+02
                                                       652 249 248
                            596 193 192
               1 .910E-01
540 140 301
                                                                      5 .790E+02
               1 .178E+01
                            597 194 193
                                           5 .790E+02
                                                       653 250 249
541 141 142
                            598 195 194
                                           5 .790E+02
                                                       654 251 250
                                                                        .790E+02
               4 .306E+00
542 141 285
                                                                      5 .790E+02
               1 .178E+01
                                                       655 252 251
                                    195
                                           5 .790E+02
543 142 143
                            599 196
                            600 197 196
                                           5 .790E+02
                                                       656 253 252
                                                                      5 .790E+02
544 142 286
               4 .306E+00
                                                                      5 .790E+02
                                           5 .790E+02
                                                       657 254 253
               1 .178E+01
                            601 198 197
545 143 144
                                           5 .790E+02
                                                       658 255
                                                               254
                                                                      5 .790E+02
               4 .306E+00
                            602 199 198
546 143 287
                                           5 .790E+02
                                                       659 256 255
                                                                      5 .790E+02
                            603 200 199
547 144 288
               4 .306E+00
                                                                      5 .790E+02
                                           5 .790E+02
                                                       660 257 256
               5 .790E+02
                            604 201 200
548 145 302
                                           5 .790E+02
                                                       661 258
                                                               257
                                                                        .790E+02
                 .790E+02
                            605 202 201
549 146 145
                                                                      5 .790E+02
               5 .790E+02
                                            .790E+02
                            606 203 202
                                           5
                                                       662 259 258
550 147 146
                                           5 .790E+02
                                                                        .790E+02
                                                       663 260 259
                 .790E+02
                            607 204 203
551 148
        147
               5
                                                                      5 .790E+02
                                                       664 261 260
                 .790E+02
                                           5 .790E+02
                            608 205 204
552 149 148
               5
                                                                      5 .790E+02
                 .790E+02
                            609 206 205
                                           5 .790E+02
                                                       665
                                                           262
                                                                261
553 150 149
               5
                                                                      5 .790E+02
                                           5 .790E+02
                                                       666 263 262
                 .790E+02
                            610 207 206
554 151 150
               5
                                                                      5 .790E+02
                                                        667 264 263
                            611 208 207
                                           5 .790E+02
555 152 151
               5
                 .790E+02
                                           5 .790E+02
                                                        668 265
                                                               264
                                                                      5 .790E+02
                            612 209 208
                 .790E+02
556 153 152
                                                                      5 .790E+02
                                            .790E+02
                            613 210 209
                                                        669
                                                           266
                                                                265
                 .790E+02
                                           5
557 154 153
               5
                                                                      5 .790E+02
                                           5 .790E+02
                                                       670 267 266
                 .790E+02
                            614 211 210
558 155 154
                                                                      5 .790E+02
                                           5 .790E+02
                                                       671 268 267
               5 .790E+02
                            615 212 211
559 156 155
                                                                      5 .790E+02
                                           5 .790E+02 672 269 268
                           616 213 212
               5 .790E+02
560 157 156
```

Brnh	Fro	om To	Tag	Conduct
673	270	269	_	790E+02
674	271	270	_	790E+02
			_	
675	272	271	5	.790E+02
676	273	272	5	.790E+02
677	274	273	5	.790E+02
678	275	274	5	.790E+02
679	276	275	5	.790E+02
680	277	276	5	790E+02
681	278	277	5	790E+02
682	279	278	5 .	790E+02
683	280	279	5 .	790E+02
684	281	280	5 .	.790E+02
685	282	281	5 .	.790E+02
686	283	282	5 .	.790E+02
687	284	283	5 .	.790E+02
688	285	284	5 .	.790E+02
689	286	285	5 .	.790E+02
690	287	286	5 .	.790E+02
601	222	227	5	790F±02

TASS GENERAL INPUT MENU - SI Units

(1) Case Title: TALSR(METRIC)---RUN 4. COMPLEX MODEL, MASS FLOW OF 272.2 kg/hr (600 lbm/hr)

(2)	Nodes	288	
(3)	Constant Temperatures	2	
(4)	Unique Exponents	0	
(5)	Temperature Dependent Conductances	0	
(6)	Temperature Dependent Heat Inputs	0	
(7)	Computational Accuracy	.0100	
(8)	Starting Temperature	25.0	
Are	these inputs correct (Y/N) ? Y		

Class Clas				מישונים ביינים ביינים ביינים ביינים ביינים ואינים ואינים ואינים ביינים אות אינים ביינים אות אינים מישונים ביינים אות אינים ביינים אות היינים ביינים אות היינים ביינים אות היינים ביינים אות היינים ביינים			the same of the same	Maria para Committee		
Channel Wikit (b) Effective Daminate (1900) (1900) (1901) (1900)		(cm)	(can)	(Wicm-K)			(cur)	(run)	(m. cm)	
Chanciare Milital (b) Effective Diameter Househous Diameter Conf. Vir.1 Dial Labouren Nobles Flavinosa (cm) (cm) (VVIX) (cm) (VVIX) (cm) (cm) (cm) (cm) (vVIX) (cm) (vVIX) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm) <	0.510	0.015	0.0533	4.01	1900.00	0.707	0.635	0.463	0.134	
Chanciar Diameter (cm) (cm) VIA (cm) (Cm) (VMA) (Cm) (Cm) <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>										
Carry Carr	3									
1143	N-Value	Channel Width (b)	Effective Diameter		E L	Ying	Dist. between Nodes	Finalisade	K - Value	
NA		free	ij	(W/mgcm-K)	(cm)	(WW)	(cn)		(MIM)	
144 NA	×			NA			0 302	VN.	1 7784	
HAA HAA <td>2</td> <td></td> <td></td> <td>2.040</td> <td></td> <td></td> <td>0 302</td> <td>MIA</td> <td>00000</td> <td></td>	2			2.040			0 302	MIA	00000	
1143 0 10 10 10 10 10 10 10	2			NA			0.334	S S	6043	
1143 0.1019 0.03626 0.65200 0.01241 0.357 6.890 1143 0.1019 0.03626 0.65200 0.01241 0.357 6.890 1143 0.1019 0.03626 0.65200 0.01241 0.357 6.890 1144 0.0441 0.00426 0.65200 0.01241 0.357 6.890 1145 0.0441 0.00426 0.05256 0.65200 0.01245 0.357 6.890 1144 0.1019 0.03626 0.65200 0.01245 0.357 6.890 1145 0.1019 0.03626 0.65200 0.01245 0.357 6.890 1145 0.1019 0.03626 0.66200 0.01245 0.357 6.890 1145 0.1019 0.03626 0.66900 0.01245 0.357 6.890 1145 0.1019 0.03626 0.66900 0.01134 0.357 6.890 1145 0.1019 0.03626 0.66900 0.01144 0.367 6.890 1145 0.1019 0.03626 0.66900 0.01144 0.367 6.890 1145 0.1019 0.03626 0.66000 0.01144 0.367 6.890 1145 0.1019 0.03626 0.66000 0.01144 0.367 6.890 1145 0.1019 0.03626 0.66100 0.01144 0.367 6.890 1145 0.1019 0.03626 0.66100 0.01144 0.367 6.890 1145 0.1019 0.03626 0.66100 0.01144 0.367 6.890 1145 0.1019 0.03626 0.66100 0.01144 0.367 6.890 1145 0.1019 0.03626 0.66100 0.01144 0.367 6.890 1145 0.1019 0.03626 0.66100 0.01144 0.367 6.890 1145 0.1019 0.03626 0.66100 0.01144 0.367 6.890 1145 0.1019 0.03626 0.66100 0.01144 0.367 6.890 1145 0.1019 0.03626 0.66100 0.01144 0.367 6.890 1145 0.1019 0.03626 0.66100 0.01144 0.367 6.890 1146 0.1019 0.03626 0.66000 0.01144 0.367 6.890 1147 0.1019 0.03626 0.66000 0.01144 0.367 6.890 1148 0.1019 0.03626 0.66000 0.01144 0.367 6.890 1149 0.1019 0.03626 0.66000 0.01144 0.367 6.890 1140 0.1019 0.03626 0.66000 0.01144 0.367 0.460 0.060 0.0004 0.03620 0.00040 0.00120 0.465 0.460 0.000 0.0004 0.0004 0.00040 0.00040 0.465 0.460 0.000 0.0004 0.0004 0.00040 0.00040 0.4	3			N.A.			0.367	A/M	1 4613	
1144 0 0 0 0 0 0 0 0 0	8			2.040			0.367		71061	
1144 0 0 0 0 0 0 0 0 0	2	1.143	0.1010	0.03626	0.68200	0.01333	0.367	2880	0.0054	
1143 01019 0.00325 0.65200 0.01291 0.367 0.690 0.00325 0.947 0.949 0.00325 0.947 0.00325 0.947 0.00325 0.947 0.00325 0.947 0.00325 0.947 0.00325 0.00325 0.947 0.00325 0.947 0.00325 0.947 0.00325 0.947 0.00325 0.947 0.00325 0.947 0.00325 0.947 0.00325 0.947 0.00327 0.947 0.00327 0.940 0.00325 0.940 0.00325 0.940 0.00325 0.940 0.00325 0.940 0.01328 0.947 0.948 0.949 0.00325 0.00325 0.00325 0.00325 0.00325 0.01219 0.01219 0.0357 0.940 0.01319 0.00325 0.00325 0.01219 0.01219 0.0357 0.940 0.01219 0.01219 0.0357 0.940 0.01219 0.0357 0.940 0.01219 0.01219 0.0357 0.940 0.01219 0.01219 0.0357 0.940 0.01219 0.00325 0.00325 0.01140 0.01214 0.01219 0.00325 0.01140 0.01140 0.0357 0.940 0.01144 0.0101 0.00325 0.940 0.01144 0.0114 0.0101 0.00325 0.940 0.01144 0.0114 0.0101 0.00325 0.940 0.01144 0.037 0.0101 0.00325 0.940 0.01144 0.0114 0.0101 0.00325 0.940 0.01144 0.037 0.0104 0.00325 0.940 0.01144 0.037 0.0104 0.00325 0.940 0.01144 0.037 0.0104 0.00325 0.940 0.01144 0.037 0.0104 0.00325 0.940 0.01144 0.037 0.0104 0.00325 0.940 0.01144 0.037 0.0104 0.00325 0.940 0.01144 0.037 0.0104 0.00325 0.940 0.01144 0.0104 0.00325 0.940 0.01144 0.0104 0.00325 0.940 0.01144 0.0104 0.00325 0.940 0.01144 0.0104 0.00325 0.940 0.01144 0.0104 0.00325 0.940 0.01144 0.0104 0.00325 0.940 0.01144 0.0104 0.00325 0.940 0.01144 0.0104 0.00325 0.940 0.01144 0.0104 0.00325 0.940 0.0034	Z	1.143	0.1010	0.03626	0.66800	0.01314	0.367	6,880	0.000	
0.004 0.00681 0.04746 0.00282 0.05250 0.05260	2	1.143	0.1019	0.03626	0.65200	0.01291	0.367	0 800	0.0024	
1143 0 1019 0 008228 0 63500 0 10156 0 387 6 880 1143 0 1019 0 00828 0 62100 0 10126 0 387 6 880 1143 0 1019 0 00828 0 62100 0 11326 0 387 6 880 1143 0 1019 0 00828 0 6000 0 11326 0 387 6 880 0 651 0 00820 0 00740 0 10110 0 387 6 880 0 652 0 00820 0 00110 0 387 6 880 6 880 0 652 0 00820 0 00110 0 387 6 880 6 880 0 652 0 00820 0 00110 0 387 6 880 6 880 1 143 0 1019 0 00820 0 68100 0 01164 0 387 6 880 1 143 0 1019 0 03828 0 68100 0 01164 0 387 6 880 1 143 0 1019 0 03828 0 68100 0 01164 0 387 6 880 1 143 0 1019 0 03628	2	100.0	0.0681	0.04746		0.00282	0 367	0999	0.0241	
0.269 0.0890 0.03987 0.06650 0.5276 0.0846 0.0346 0.0650 0.0245 0.0464 0.03476 0.00247 0.01245 0.367 0.6800 0.414 0.0446 0.03628 0.60800 0.01248 0.367 0.6800 0.414 0.0468 0.03828 0.60800 0.01236 0.367 0.6800 0.434 0.1019 0.03828 0.68000 0.01217 0.367 0.680 1.143 0.1019 0.03828 0.68000 0.01217 0.367 0.680 0.441 0.0082 0.03478 0.68000 0.01217 0.367 0.680 0.441 0.1019 0.03628 0.68000 0.01149 0.367 0.680 0.772 0.0083 0.03628 0.68100 0.01144 0.367 0.680 0.772 0.0083 0.03628 0.68100 0.01144 0.367 0.680 1.143 0.1019 0.03628 0.68100 0.01144 0.367 <t< td=""><td>X10</td><td>1.143</td><td>0.1019</td><td>0.03626</td><td>0.63500</td><td>0.01266</td><td>0.367</td><td>0.880</td><td>0.0907</td><td></td></t<>	X10	1.143	0.1019	0.03626	0.63500	0.01266	0.367	0.880	0.0907	
1143 0.1019 0.00529 0.62100 0.01245 0.987 0.680 1.144 0.1019 0.02843 0.68000 0.01245 0.987 0.680 1.143 0.1019 0.02828 0.68000 0.01210 0.987 6.880 1.143 0.1019 0.02828 0.68000 0.01210 0.987 6.880 0.650 0.00820 0.03828 0.68000 0.01210 0.987 6.880 0.651 0.00820 0.03828 0.68100 0.0114 0.987 6.880 0.681 0.00820 0.03828 0.68100 0.01144 0.987 6.880 0.716 0.0082 0.03828 0.68100 0.01144 0.387 6.880 0.716 0.0082 0.03828 0.68100 0.01144 0.387 6.880 1.143 0.1019 0.03828 0.68100 0.01144 0.387 6.880 1.143 0.1019 0.03828 0.68100 0.01144 0.387 6.880 </td <td>. X</td> <td>0.260</td> <td>0.0890</td> <td>0.03967</td> <td></td> <td>0.00658</td> <td>0.367</td> <td>6.860</td> <td>0.0492</td> <td></td>	. X	0.260	0.0890	0.03967		0.00658	0.367	6.860	0.0492	
0.414 0.00446 0.00481 0.00407 0.0367 6.890 0.531 0.0046 0.03428 0.60600 0.01226 0.367 6.890 0.531 0.0062 0.03428 0.60600 0.01210 0.367 6.890 0.620 0.0062 0.03476 0.04210 0.367 6.890 1.143 0.1019 0.03680 0.68400 0.01149 0.387 6.890 0.716 0.0049 0.03680 0.68400 0.01149 0.387 6.890 0.716 0.0049 0.03680 0.68400 0.01149 0.387 6.890 0.716 0.0044 0.03680 0.68100 0.01149 0.387 6.890 0.716 0.0044 0.03680 0.68100 0.01149 0.387 6.890 1.143 0.1019 0.03680 0.68100 0.01149 0.387 6.890 1.143 0.1019 0.03680 0.68100 0.01149 0.387 6.890 1.143	K12	1.143	0.1019	0.03626	0.62100	0.01245	0.367	099.9	0.0893	
0.531 0.00669 0.01028 0.66900 0.01128 0.567 6.690 0.531 0.00669 0.03746 0.69800 0.01210 0.367 6.690 1.143 0.1019 0.0326 0.6900 0.01210 0.367 6.890 1.143 0.1019 0.0326 0.6900 0.01194 0.367 6.890 1.143 0.1019 0.03626 0.6910 0.01164 0.367 6.890 1.143 0.1019 0.03626 0.6910 0.01164 0.367 6.890 1.143 0.1019 0.03626 0.6910 0.01164 0.367 6.890 1.143 0.1019 0.03626 0.6910 0.01164 0.367 6.890 1.143 0.1019 0.03626 0.68100 0.01164 0.367 6.890 1.143 0.1019 0.03626 0.68100 0.01164 0.367 6.890 1.143 0.1019 0.03626 0.58100 0.01164 0.367 6.890	23	+1+ 0	0.0046	0.03613		0 00937	0.367	099.9	0.0682	
0.531 0.00020 0.03740 0.01130 0.567 6.860 0.620 0.00020 0.03276 0.66000 0.01210 0.367 6.860 0.620 0.0002 0.03746 0.66000 0.01210 0.367 6.860 0.621 0.0002 0.03746 0.66000 0.01149 0.367 6.860 0.641 0.0002 0.03600 0.66400 0.01149 0.367 6.860 1.143 0.1019 0.03600 0.66400 0.01144 0.367 6.860 0.716 0.0002 0.03600 0.66100 0.01144 0.367 6.860 0.717 0.0002 0.00144 0.367 6.860 0.367 6.860 1.143 0.1019 0.03626 0.56100 0.01164 0.367 6.860 1.143 0.1019 0.03626 0.56100 0.01164 0.367 6.860 1.143 0.1019 0.03626 0.56100 0.01164 0.367 6.860	1	21.0	0.1010	0.03628	0.60800	0.01226	0.367	6.860	0.0079	
0.620 0.01210 0.3626 0.66000 0.01210 0.367 6.600 1.143 0.1019 0.03626 0.66000 0.01241 0.367 6.600 1.143 0.1019 0.03626 0.6400 0.01184 0.367 6.600 1.143 0.1019 0.03626 0.66100 0.01184 0.367 6.800 0.732 0.0044 0.03626 0.66100 0.01184 0.367 6.800 0.732 0.0044 0.03626 0.66100 0.01184 0.367 6.800 0.732 0.0044 0.03626 0.66100 0.01184 0.367 6.800 1.143 0.1019 0.03626 0.66100 0.01184 0.367 6.800 1.143 0.1019 0.03626 0.66100 0.01184 0.367 6.800 1.143 0.1019 0.03626 0.56100 0.01184 0.367 6.800 1.143 0.1019 0.03626 0.56000 0.01194 0.367 6.800 <td>A10</td> <td>1530</td> <td>0.0000</td> <td>0.03740</td> <td></td> <td>0.01136</td> <td>0.367</td> <td>6.880</td> <td>0.0619</td> <td></td>	A10	1530	0.0000	0.03740		0.01136	0.367	6.880	0.0619	
1143 0.1019 0.02626 0.69000 0.01196 0.367 6.860 0.681 0.0090 0.03626 0.6900 0.01196 0.367 6.860 1.143 0.1019 0.03626 0.68100 0.01184 0.367 6.890 0.716 0.0003 0.03626 0.68100 0.01184 0.367 6.890 0.716 0.0003 0.03626 0.68100 0.01184 0.367 6.890 0.732 0.0004 0.03626 0.68100 0.01184 0.367 6.890 1.143 0.1019 0.03626 0.68100 0.01184 0.367 6.890 1.143 0.1019 0.03626 0.58100 0.01184 0.367 6.890 1.143 0.1019 0.03626 0.58000 0.01184 0.367 6.890 1.143 0.1019 0.03626 0.58000 0.01184 0.367 6.890 1.143 0.1019 0.03626 0.58000 0.01194 0.367 6.890	A10	1.143	0.1010	0.03626	0.69800	0.01210	0.367	0.000	0.0869	
0.0861 0.00000 0.01169 0.0367 0.680 1.143 0.1019 0.03626 0.68400 0.01169 0.367 6.880 1.143 0.1019 0.03626 0.68100 0.01164 0.367 6.880 1.143 0.1019 0.03626 0.68100 0.01119 0.367 6.880 1.143 0.1019 0.03626 0.68100 0.01119 0.367 6.880 1.143 0.1019 0.03626 0.68100 0.01144 0.367 6.880 1.143 0.1019 0.03626 0.68100 0.01144 0.367 6.880 1.143 0.1019 0.03626 0.68100 0.01144 0.367 6.880 1.143 0.1019 0.03626 0.58000 0.01194 0.367 6.880 1.143 0.1019 0.03626 0.58000 0.01194 0.367 6.880 1.143 0.1019 0.03626 0.58000 0.01194 0.367 6.880 1.143	K 18	0.020	0.0000	0.03/16		0.01271	0.367	6.860	0.0911	
1,143	9 0	2.5	8101.0	0.03626	0.58000	0.01198	0.367	099.9	0.0860	
0.716 0.00000	00	148	0.000	0.03636	00100	0.01354	0.367	6.880	0.0960	
1.143	2	0.716	0.0003	003600	2	0.01100	705.0	000.0	0.0854	
0.732 0.00044 0.03686 0.01149 0.367 6.890 1.143 0.1019 0.03626 0.6410 0.01144 0.367 6.890 1.143 0.1019 0.03626 0.65100 0.01144 0.367 6.890 1.143 0.1019 0.03626 0.65000 0.01144 0.367 6.890 1.143 0.1019 0.03626 0.65000 0.01190 0.367 6.890 1.143 0.1019 0.03626 0.65000 0.01207 0.367 6.890 1.143 0.1019 0.03626 0.56000 0.01207 0.367 6.890 1.143 0.1019 0.03626 0.56000 0.01207 0.367 6.890 1.143 0.1019 0.03626 0.56000 0.01207 0.367 6.890 1.143 0.1019 0.03626 0.56000 0.01207 0.367 6.890 1.144 0.1019 0.03626 0.56000 0.01199 0.465 7.540	122	1.143	0.1010	0.03626	0.58100	001164	196.0	989	0000	
1.143 0.1019 0.03626 0.58100 0.01164 0.367 6.880 1.143 0.1019 0.03526 0.58100 0.01164 0.367 6.880 1.143 0.1019 0.03526 0.58000 0.01194 0.367 6.880 1.143 0.1019 0.03526 0.58000 0.01194 0.367 6.880 1.143 0.1019 0.03526 0.58000 0.01207 0.367 6.880 1.143 0.1019 0.03526 0.58000 0.01207 0.367 6.880 1.144 0.1019 0.03526 0.58000 0.01207 0.367 6.880 1.104 0.1019 0.03628 0.58000 0.01246 0.367 0.465 1.44 0.206 0.1019 0.03670 0.44800 0.00496 0.465 1.540 0.206 0.1040 0.03670 0.44800 0.00496 0.465 1.540 0.206 0.0049 0.1049 0.0367 0.0369 0.465	82	0.732	10000	0.03666		001410	296.0	6 840	0.0000	
1.143 0.1019 0.03626 0.56100 0.01164 0.367 6.680 1.143 0.1019 0.0356 0.58500 0.0119 0.367 6.890 1.143 0.1019 0.0356 0.56000 0.0119 0.367 6.890 1.143 0.1019 0.03626 0.56000 0.01207 0.367 6.890 1.143 0.1019 0.03626 0.50200 0.01207 0.367 6.890 1.143 0.1019 0.03626 0.50200 0.01216 0.367 6.890 1.143 0.1019 0.03626 0.50200 0.01216 0.367 6.890 1.143 0.1019 0.03620 0.50200 0.01216 0.367 6.890 1.144 0.1018 0.03670 0.44800 0.0049 0.465 7.540 2.286 0.0004 0.03670 0.44800 0.0049 0.465 7.540 2.286 0.1040 0.03670 0.0499 0.465 7.540 <t< td=""><td>ğ</td><td>1.143</td><td>0.1010</td><td>0.03626</td><td>0.58100</td><td>0.01184</td><td>196.0</td><td>6.880</td><td>0.0850</td><td></td></t<>	ğ	1.143	0.1010	0.03626	0.58100	0.01184	196.0	6.880	0.0850	
1143 0.1019 0.03626 0.65500 0.01190 0.367 6.660 1.143 0.1019 0.03626 0.65000 0.01198 0.367 6.690 1.143 0.1019 0.03626 0.60000 0.01198 0.367 6.690 1.143 0.1019 0.03626 0.60200 0.01216 0.367 6.690 NA 1.143 0.1019 0.03626 0.60200 0.01216 0.367 6.690 NA 1.104 0.1019 0.03620 0.50200 0.01216 0.367 6.890 1.104 0.1019 0.03670 0.44800 0.00169 0.465 7.540 0.206 0.0004 0.03670 0.44800 0.00498 0.465 7.540 2.037 0.1040 0.03678 0.00498 0.465 7.540 2.040 0.1040 0.03678 0.00498 0.465 7.540 1.184 0.1021 0.03670 0.00108 0.465 7.540 1.	92	1.143	0.1010	0.03626	0.56100	0.01184	0.367	6.880	0.0850	
1.143 0.1019 0.03626 0.66000 0.01196 0.367 6.660	97	1.143	0.1010	0.03626	0.58500	0.01190	0.367	6.660	0.0855	
1.143	2	3.	0.1010	0.03626	0.69000	0.01198	0.367	6.880	0.0860	
1.143	2	1.143	0.1010	0.03626	0.59600	0.01207	0.367	6.880	0.0867	
1.144 0.1019 0.00528 0.001216 0.367 6.890 1.104 0.1018 0.03529 0.59000 0.01159 0.465 NA 2.040 0.03529 0.59000 0.01159 0.465 7.540 0.206 0.1001 0.03578 0.1009 0.01745 0.465 7.540 0.206 0.0004 0.03578 1.10100 0.01745 0.465 7.540 0.206 0.0004 0.03578 1.10100 0.01745 0.465 7.540 0.206 0.0004 0.03578 0.05200 0.01211 0.466 7.540 0.600 0.1021 0.03570 0.36000 0.00708 0.465 7.540 0.1021 0.03570 0.36000 0.00708 0.465 7.540 0.1021 0.03570 0.36000 0.00708 0.465 7.540 0.1021 0.03570 0.03600 0.00708 0.465 7.540		•		×22			0.418	NVA	1 2907	
NAA NAA NAA 0.465 NAA 2.040 2.040 0.01199 0.465 NAA 1.104 0.1018 0.03679 0.44800 0.01199 0.465 7.540 0.286 0.1001 0.03679 0.44800 0.00669 0.465 7.540 0.286 0.0004 0.03878 0.14800 0.00408 0.465 7.540 0.286 0.0004 0.03878 0.10100 0.01445 0.465 7.540 1.406 0.1020 0.03600 0.02000 0.00714 0.465 7.540 0.800 0.1021 0.03670 0.36000 0.00708 0.465 7.540 1.184 0.1021 0.03670 0.03600 0.00708 0.465 7.540 1.184 0.1021 0.03622 0.65100 0.01288 0.465 7.540	2 5	245	6.1016	0.03626	0.60200	0.01216	0.367	6.840	0.0873	
1.104 0.1016 0.2040 0.01109 0.465 1.540 0.806 0.1001 0.03629 0.58000 0.01109 0.465 7.540 0.206 0.1001 0.03629 0.20300 0.0049 0.465 7.540 2.037 0.1040 0.03678 1.10100 0.0146 0.465 7.540 0.206 0.0004 0.03678 0.00300 0.01211 0.466 7.540 1.406 0.1024 0.03670 0.2600 0.01601 0.466 7.540 0.809 0.1021 0.03670 0.3600 0.01201 0.466 7.540 1.184 0.1021 0.03670 0.001266 0.465 7.540	2 5			NA.			0.465	NA	1.1524	
0.000 0.0005 0.0005 0.01199 0.465 7.540 0.266 0.1001 0.03670 0.44800 0.00056 0.465 7.540 0.266 0.0004 0.03670 0.0480 0.0465 7.540 2.037 0.1040 0.03678 1.10100 0.01745 0.465 7.540 0.266 0.0004 0.03678 0.00200 0.00231 0.465 7.540 1.466 0.1020 0.03670 0.02200 0.0121 0.466 7.540 0.806 0.1021 0.03670 0.3600 0.00104 0.466 7.540 1.184 0.1021 0.03670 0.001286 0.465 7.540	7 5	101	97070	2.040			0.465	N/A	1.4397	
0.286 0.0904 0.0328 0.24800 0.0068 0.465 7.540 2.037 0.0904 0.03928 0.20300 0.0465 7.540 2.037 0.1040 0.03928 0.0904 0.465 7.540 2.037 0.1040 0.03878 1.10100 0.01745 0.465 7.540 1.406 0.1030 0.03600 0.82200 0.01601 0.466 7.540 1.140 0.1021 0.03600 0.3600 0.06501 7.540 7.540 1.184 0.1021 0.03670 0.3600 0.01286 0.465 7.540	25	900	9 1000	0.03620	0.0000	0.01100	0.465	7.540	0.0044	
2.237 0.1044 0.00828 0.20300 0.0448 0.465 7.540 0.209 0.1040 0.03678 1.10100 0.0446 0.465 7.540 0.200 0.0044 0.03669 0.03200 0.00231,1 0.465 7.540 1.406 0.1030 0.0360 0.02200 0.01601 0.465 7.540 1.184 0.1021 0.03670 0.36700 0.00768 0.465 7.540 1.184 0.1021 0.03672 0.65100 0.01286 0.465 7.540	25	9000	1000	0/9600	0.44800	0.00068	0.465	7.540	0.0770	
0.296 0.0004 0.0008 0.0000 0.0001 0.0465 7.540 1.406 0.0004 0.0008 0.0000 0.0001 0.466 7.540 1.406 0.1024 0.0000 0.0000 0.0001 0.466 7.540 0.809 0.1001 0.03670 0.3600 0.00700 0.465 7.540 1.184 0.1021 0.03672 0.65100 0.01280 0.465 7.540	2 %	780.0	0.000	879CO	0.20300	0.00406	0.465	7.540	0.0419	
0.0004 0.0004 0.00040 0.00031;1 0.466 7.640 1.440 0.1030 0.03600 0.08200 0.01661 0.466 7.640 0.000 0.1031 0.03670 0.0000 0.001288 0.465 7.640 1.184 0.1021 0.03672 0.66100 0.01288 0.465 7.640	3 5	9000	0.1040	0.035/8	10100	0.01745	0.465	7.540	0.1355	
1.190 0.1021 0.03620 0.01200 0.01201 0.466 7.540 1.184 0.1021 0.03622 0.05100 0.01286 0.465 7.540	2 5	9670	0.000	0.03028	0.08300	0.00231 . 1	994:0	7.640	0.0218	
1.184 0.1021 0.03622 0.85100 0.01288 0.465 7.540	2 5	900	0.000	0.03600	0.62200	0.01501	9.466	2.640	0.1171	
1,104 0.01288 0.465 7.540	9	1 184	903.0	0.036/0	0.36000	902000	0.465	7.540	0.0642	
		5	1701.0	77960.0	00100	0.01288	0.465	7 640	0,0,0	

0690	9090.0	0.0881	0.0613	0.0674	0.0820	0.0860	0.0826	0.0868	0.0830	0.0862	0.0630	09900	0.0830	0.0650	0.0626	0.0856	0.0620	0.0855	0.0610	0.0854	0.0700	0.0852	0.0784	0.0850	0.0768	0.0849	0.0747	0.0847	0.0726	0.0647	0.0711	0.0007	0.1240	0.0728	0.0021	0.0366	0.1496	0.0251	0.1265	0.0687	0.1004	0.0890	0.0675	0.0633	0.0674	0.0633	0.0873	0.0631	0.0671	0.0830	0.0670
0990	6.880	0.889	6.880	6.880	6.860	6.880	0.860	6.860	6.860	6.880	6.880	6.880	0.000	6.860	6.880	6.880	6.860	6.880	6 680	6.880	6.860	6.860	6.860	0099	6.660	6.860	6.660	6.660	0.800	6.800	6.680	7.540	7.640	7.540	7.540	7.540	7.540	7.540	7.540	7.540	7.540	7.540	6.800	6.880	6.660	6.660	6.880	6.680	6.860	6.680	6.880
0.367	0.367	196.0	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.465	0.465	0.465	0.465	0.465	0.485	0.465	0.465	0.465	0.465	0.486	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367	0.367
	_		_																																												=				
0.01241	0.01119	0.01220	0.01129	0.01218	0.01139	0.01210	0.01147	0.01206	0.01163	0.01201	0.01153	0.01198	0.01153	0.01196	0.01148	0.01192	0.01139	0.01190	0.01126	0.01166	0.01100	0.01185	0.01067	0.01184	0.01063	0.01182	0.01034	0.01179	0.01005	0.01179	0.00000	0.01160	0.01591	0.00911	0.01167	0.00456	0.01932	0.00275	0.01625	0.00867	0.01279	0.01127	0.01220	0.01158	0.01218	0.01158	0.01218	0.01155	0.01213	0.01163	0.01212
0.61800	0.54100	0.61000	0.54700	0.60300	0.65300	0.59600	0.65800	0.58500	0.56200	0.50200	0.66200	0.5000	0.56200	0.58900	0.55600	0.58600	0.55300	0.58500	0.54500	0.58400	0.63500	0.58200	0.62200	0.58100	0.50800	0.56000	0.49100	0.57600	0.47600	0.57800	0.46100	0.65900		0.41600		0.18500	1.46600	0.11100	0.05000	0.39000	0.64600	0.54500	0.60400	0.56600	0.60300	0.56500	0.60200	0.56300	0.60000	0.56200	0.50000
0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03628	0.03626	0.03626	0.03628	0.03626	0.03628	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03628	0.03626	0.03626	0.03626	0.03628	0.03629	0.03657	0.03670	0.03741	0.03928	0.03560	0.03628	0.03684	0.03670	0.03616	0.03620	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626	0.03626
0.1010	0.1010	0.1010	0.1010	0.1010	0.1010	0.1010	0.1019	0.1010	0.1010	0.101.0	0.1010	0.1019	0.1010	0.1010	0.1010	0.1010	0.1010	0.1010	0.1010	0.101.0	0.1010	0.1010	0.1010	0.1010	0.1010	0.1010	0.1010	0.1010	0.1019	0.1010	0.1010	0.1018	0.1006	0.1001	0.0073	0.0004	0.1048	0.000	0.1037	0.1001	0.1022	0.1018	0.1010	0.1010	0.1010	0.1010	0.1010	0.1010	0.1019	0.1019	0.1010
1.143	1.143	1.143	1.143	1.143	1.143	1.143	51.1	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.143	1.43	1.143	1.143	1.143	2.5	1.143	21.7	1.143	1.143	2.2	2	2	3.	27.7	2	-143	107	0.888	0.808	0.560	0.296	2.831	27.0	1.650	909	1.225	3	1.143	1.143	1.143	1.143	1.143	1.143	21.1	3.	<u> </u>
K42	K £ 3	X T	K46	¥46	K42	K48	X &	K 50	K61	K62	202	1 92	K66	K56	K67	K68	3	9	5	200	3	2	KG6	200	K67	89	9	670	5	27	2	K74	K76	876		8/4 8/4	2	3	2	25	K83	2	200	1486 1486	K87	K86	99	3	5	2 :	3

707	4 4 4 2	0.000	00000					
202	2 :	2010	0.03626	0.56100	0.01152	0.367		0.0628
2 9	2 3	0.01.0	0.03626	009540	0.01210	0.50/		0.0800
207	2 5	O. D. D.	0.03626	0.55800	0.01148	0.367	_	0.0826
100	21.5	0.101.0	0.03628	0.66600	0.01207	196.0		0.0067
3	3	0.1010	0.03626	0.65800	0.01147	0.367		0.0825
3	1.143	0.1010	0.03426	0.66500	0.01206	0.367		9990.0
900	1.143	0.1010	0.03626	0.55700	0.01145	0.367		0.0824
1013	1.15	0.1010	0.03626	0.50400	0.01204	0.367		P990:0
2013	21.1	0.1010	0.03626	0.55400	0.01140	0.367		0.0621
103	1.143	0.1010		0.54300	0.01202	0.367		0.0863
104	2	0.1010		0.65300	0.01130	0.367		079010
105	2	0.1010		0.56200	0.01201	0.367	6.640	0.0862
106	1.143	0.1010		0.65100	0.01135			0.0617
107	1.143	0.1010		0.56000	0.01100			0.0660
200	1.153	0.1010		0.54800	0.01130			0.0814
100	2.143	0.1010		0.68900	0.01198			0.0850
110	1.143	0.1010		0.64500	0.01126			0.0810
111	1.143	0.1010		0.68700	0.01103			0 0657
2112	1.43	0.1010		0.54000	0.01117			0.0805
113	1.143	0.1010	0.03626	0.0989.0	0.01192			0.0856
**		0.1010	0.03626	0.63300	0.01106	0.367		0.0707
115			NA					1.0819
116	1.143	0.1010		0.58500	0.01190	0.367		0.0656
117	1.143	0.1010	0.03626	0.62500	0.01092			0.0768
118			NA NA			0.641		0.902
110			2.040			0.518	NA	1.603
120	1.143	0.1010		0.56300			7.540	0.0936
121	7	0.1021	~	0.63400	0.01106			0.0874
122			MA					1.717
123						0.427	K	1.320
124	1.143	0.101.0		0.68100		0.312		0.0433
125	1.406	0.1030	•	0.67400	0.01314	0.312		0.1031
126			NA.			0.256		2.100
127			2.040			0.284		978.0
126	1.143	0.1010		0.68000		0.256		0.0931
120	2.037	0.1040	•	0.93600	0.01610	0.265		0.1254
8 3			NA.			0.429		1.251
151								1.061
251	2	9101.0		0.67900				0.0902
2 :	7.907	0.104/6	0.03500		0.02066			0.1720
121			Y					1.200
651	3		0.03626	0.67600				0.0000
92	2.482		0.03567					0.1712
137	3 :	0.1016	0.03620	00999				0.0002
3	3	0.10366	0.03585					0.1567
351	909 0	0.1001	0.03670	00704.0				0 07 12
9	31.1	0.10162	0.03628					0.1376
=	977.0	0.0004	0.03928	0.151.00	-			0.0325
747	0.350	0 00288	0.03867					0.0672
2 :	907.0	F050.0		114500				0.0314
*	9090						7.540	0.0703
45	1.104	91019	0.03629	0.54900	0.01133	0.465		0.0695

K146	1,143	0.1019	90000	0 66200	0.011.01	977		4
K147	1.143	0.1010	0.03626	0.56400	001157	9750	040	//000
K148	2.037	0.1040	0.03578	0.97600	0.01647	0.255	2 540	0.000
K149	1.143	0.1010	0.03626	0.56300	0.01155	0.266	25.5	2524.0
K160	1.496	0.1030	0.03600	0.71900	0.01375	0.312	2540	27010
K151	1.143	0.1010	0.03628	0.56200	0.01163	0.312	7.540	0.000
K162	1.184	0.1021	0.03622	0.58200	0.01184	. T.	7.540	0.0933
KIES	1.143	0.1010	0.03626	0.56000	0.01150	0.541	7.540	10000
KIN	1.143	0.1010	0.03626	0.67300	0.01171	0.367	6.660	0.0842
X156	3 7 7	0.00.0	0.03626	0.55800	0.01147	0.367	6.860	0.0825
K167	21.1	91010	0.03626	0.57200	0.01161	0.367	6.660	0.0648
K168	1.143	0.1010	0.03626	0.56200	0.01185	0.367	0000	0.0824
K160	1.143	0.1010	0.03626	0.55600	0.01144	0.367	98	0.003
K160	1.143	0.1010	0.03626	0.58500	0.01190	0.367	6.860	0.0855
K161	21.1	0.1010	0.03626	0.65400	0.01140	196.0	6.660	0 0621
K162	3	0.1010	0.03626	0.585.0	0.01100	0.367	099.9	0.0855
200	37.7	0.1010	0.03626	0.56300	0.01130	0.367	6.880	0.0820
7100 7100	37.	0.000	0.03628	0.68500	0.01190	0.367	6.650	0.0855
K166	3 5	3101.0	0.03626	0.55100	0.01135	0.367	6.880	0.0617
K167	31.	0.1010	0.03626	0.0000	001100	796.0	0.850	0.0855
K168	31.	0.1010	0.03626	0 58400	0.01134	0.30	0.890	0.0616
K169	21:1	0.1010	0.03626	0 54900	001132	0.367	0.000	10000
K170	1.143	0.1010	0.03626	0.56400	001186	0.367	0.000	2000
K171	1.143	0.1019	0.03626	0.54800	0.01130	0.367	6.860	0.0914
K172	1.143	0.1010	0.03626	0.58300	0.01167	0.367	6.880	0.0053
K173	£.	0.1019	0.03626	0.64700	0.01129	0.367	089.9	0.0613
K174	21.5	0.1010	0.03626	0.58200	0.01185	0.367		0.0852
K176	31.	0.1010	0.03626	0.54500	0.01126	0.367	099.9	0.0610
K176	27.	0.1010	0.03626	0.58100	0.01164	0.367		0.0650
K17/	51.1	0.1010	0.03626	0.54400	0.01124	0.367		0.080.0
81/8 7130	31.1	0.1010	0.03626	0.58000	0.01182	0.367		0.0649
	2 :	0.1010	0.03626	0.54300	0.01122	0.367		0.0008
7100 K181	2 5	2000	0.03626	0.2720	0.01177	0.367		0.0646
K182	27.7	9000	070600	00100	0.01119	195.0		9090.0
K163	2 7	90.0	0.03626	0.07000	0.011/6	1960		0.0645
K164	1.163	6101.0	0.03626	0 67500	0.01174	0.367	0000	90909
K185	1.143	0.1019	0.03626	0.63900	0.01116	0.367		0 0904
K186	1.104	0.1010	0.03629	0.55300	0.01140	0.465		0.000
K187	1 225	0.1022	0.03618		0.01180	0.465		0.0030
K186	908.0	0.1001	0.03670	0.39500	0.00667	0.465		0.0604
2013	33.0	6.1037	0.03564		0.01577	0.465	2.540	0.1220
300	0.20	0000	0.03426		0.00288	991.0	_	0.0260
I A I A	1587	9500.0	0.03560		0.01917	0.465		0.1485
N 100	900	0.000	0.03628			0.465		0.0377
201	900	0.100	0.03670	0.41300	0.00002 1 1	0.465		0.0721
6196	3	91910	0.03626	0.55100	001136	0.465		0.0697
200	911	0.1010	0.03020	O Section	0.01056	0.90		0.0763
2013	3 7	91010	0.036.00		291100	0.367	6.800	0.0836
			n.vanga	00/100	0.010/0	296.0		0.0778
				-				

K156	1.143	0.1010	0.03626	0.56700		0.367	0990	0.0835
3	1.143	0.101.0	0.03626	0 53100			6.660	0.070
K200	1.143	0.1010	0.03626	0.56600	001160	0.367	099.9	0.0634
K201	1.143	0.1019	0.03626	0.54400	0.01124	0.367	9 890	6.0809
K202	1 143	0.1019	0.03626	0.56300	0.01155	0.367	6.680	0.0831
K203	1.143	0.1010	0.03626	0.55700	0.01145	0.367	6.660	0.0624
K204	1.143	0.1010	0.03626	0.56200	0.01153	0.367	0999	0.0630
K205	1.143	0.1010	0.03626	0.66600	0.01163	0.367	6.880	0.0036
K206	1.143	0.1010	0.03626	0.56100	0.01162	0.367	6.850	0.0828
K207	1.143	0.1010	0.03626	0.57600	0.01176	0.367	0989	0.0845
K208	1.143	0.1010	0.03626	0.56000	0.01150	0.367	0999 9	0.0627
K209	1.143	0.1010	0.03626	0.58100	0.01184	0.367	6.880	0.0850
K210	1.143	0.1019	0.03626	0.55900	0.01148	0.367	6.680	0.0826
K211	1.143	0.1010	0.03626	0.58400	0 01188	0.367	6.680	0.0854
K212	1.143	0.1019	0.03626	0.65900	0.01148	0.367	6.660	0.0826
K213	1.143	0.1019	0.03626	0.58400	0.01188	0.367	6.880	0.0854
K214	1.143	0.1010	0.03626	0.65800	0.01147	0.367	6.860	0.0625
K216	1.143	0.1010	0.03626	0.58300	0.01167	0.367	6.860	0.0653
K216	1.143	0.1010	0.03626	0.55800	0.01147	0.367	099 9	0 0625
K217	1.143	0.1010	0.03626	0.56000	0.01162	0.367	0999 9	0.0840
K218	1.143	0.1010	0.03628	0.55800	0.01147	0.367	6.660	0.0625
617	1.143	0.1010	0.03626	0.57400	0.01173	0.367	099 9	0.0843
6220	21.1	0.1010	0.03626	0.55800	0.01147	0.367	099 9	0.0625
(22)	1.143	0.101.0	0.03626	0.56700	0.01161	0.367	9 990	0.0835
222	1.143	0.1019	0.03626	0.56100	0.01162	196.0	6.680	0.0628
6223	1.143	0.1010	0.03626	0.55800	0 01147	0.367	6.860	0.0625
K224	1.143	0.101.0	0.03626	0.56400	121100	1960	6.880	0.0632
K225	1.143	0.1010	0.03626	0.65000	0.01134	100.0	098.9	0.0816
6226	1.143	0.1010	0.03626	0.57000	0.01166	0.367	6.660	0.0836
1221	1.104	0.1018	0.03629	0.52200	0.01066	0.466	7.540	0.0861
K226	1.184	0.1021	0.03622	0.60200	0.01215	0.465	7.540	9580.0
K220	909.0	0.1001	0.03670	0.36500	0.00808	0.465	7 540	0.0650
K230	1.406	0.1030	0.03600	0.77600	0.01449	0.465	1.540	0.1133
K231	0.296	10000	0.03928	0.09400	0.00234	0.465	7.540	0.0220
K232	2.037	0.1040	0.03578	1.06100	0.01716	0.465	1.540	0.1333
K233	0.296	1000.0	0.03928	0.20200	0.00486	0.465	7.640	0.0417
K234	0.60	0.1001	0.03670	0 44300	0.00958	0.465	7.540	0.0763
K236	1.104	0.1018	0.03629	0.58200	0.01166	0.465	95	0.0036
738	3	0.1010	0.03626	0.58300	0.01202	0.367	6.660	0.0963
C31	3::	0.1010	0.03626	0.58500	0.01190	0.367	0000	0.0855
9 9	2 5	2000	0.03620	0.5000	0.01100	100.0	0000	0.000
900		200	970000	0.50500	0.01103	100.0	7000	0.0037
	2	8000	0.0000	0.0000	0.01183	2000	0000	10000
	2 :	0.1019	0.03626	DODGO O	0.01150	795.0	0000	1790'0
	2	0.1010	0.03020	000000	0.01146	1000	0.000	0.0020
2 3	2 5	2000	979000	0.69300		1950	0000	0.0020
45	2 3	9000	0.0000	002000			900	0.00.0
9 5	2 3	2000	0.03626	0.50700	101100	2000	0000	6,000
	2 :	0.101.0	979670	0.5/2/0	0.011/4	196.0	099.9	6.0844
74	2 3	0.101.0	979676	0.58600	0.01192	0.367	6.660	0.0856
\$ 5	24.5	0.1016	0.03626	00000	0.01212	0.367	099.9	0.0870
•	2	6.1016	0.03626	0.61200	0.01232	196.0	999.9	0.0084

0.0698 0.0011

6.660 6.860 NA

0.367 0.367 NA

0.01253 0.01272 NA

0.62600 0.63900 NA

0.03626 0.03626 N/A

0.1010 0.1010 NA

1.143 1.143 NA

K255 K255 K255

Brnh	From To	Tag (Conduct	Brnh	Fro	m To	Tac	Conduct	Brnh	Fro	OT TIC	Тас	Conduct
1	1 2	_	178E+01	57		301	-	.860E-01	113	32	176		.114E+01
2	1 145		933E+00	58	17	301	1	.910E-01	114	32	301	1	.860E-01
3	2 3		178E+01	59	18	19	ī	.146E+01	115	32	301	1	
4	2 146		933E+00	60		162	4			33			.830E-01
5							-	.114E+01	116		34	1	.146E+01
	3 4		178E+01	61		301	1	.860E-01	117	33	177	4	.114E+01
6	3 147		933E+00	62		301	1	.820E-01	118	33	301	1	.860E-01
7	4 5		L60E+01	63	19	20	1	.146E+01	119	33	301	1	.830E-01
8	4 148		33E+00	64		163	4	.114E+01	120	34	35	1	.146E+01
9	5 6		L46E+01	65		301	1	.870E-01	121	34	178	4	.114E+01
10	5 149		L14E+01	66	19	301	1	.680E-01	122	34	301	1	.860E-01
11	5 301	1 .9	954E-01	67	20	21	1	.129E+01	123	34	301	1	.830E-01
12	6 7	1 .1	L46E+01	68	20	164	4	.114E+01	124	35	36	1	.146E+01
13	6 150	4 . 1	L14E+01	69	20	301	1	.870E-01	125	35	179	4	.114E+01
14	6 301	1 .9	940E-01	70	20	301	1	.490E-01	126	35	301	1	.860E-01
15	7 8	1 .1	146E+01	71	21	22	1	.115E+01	127	35	301	1	.820E-01
16	7 151	4 .]	114E+01	72		165	4	.144E+01	128	36	37	1	.146E+01
17	7 301		920E-01	73	21	301	1	.940E-01	129	36	180	4	.114E+01
18	7 301		240E-01	74	22	23	1	.115E+01	130	36	301	i	.860E-01
19	8 9		146E+01	75		166	4	.144E+01	131	36	301	1	.810E-01
20	8 152		114E+01	76	22	301	1	.770E-01	132	37			
											38	1	.146E+01
21			910E-01	77	23	24	1	.115E+01	133	37	181	4	.114E+01
22	8 301		190E-01	78		167	4	.144E+01	134	37	301	1	.850E-01
23	9 10		L46E+01	79	23	301	1	.420E-01	135	37	301	1	.800E-01
24	9 153		L14E+01	80	24	25	1	.115E+01	136	38	39	1	.146E+01
25	9 301		390E-01	81		168	4	.144E+01	137	38	182	4	.114E+01
26	9 301		580E-01	82		301	1	.136E+00	138	38	301	1	.850E-01
27	10 11		L46E+01	83		301	1	.220E-01	139	38	301	1	.780E-01
28	10 154	4 .]	114E+01	84	25	26	1	.115E+01	140	39	40	1	.146E+01
29	10 301	1 .8	380E-01	85	25	169	4	.144E+01	141	39	183	4	.114E+01
30	10 301	1 .8	320E-01	86	25	301	1	.117E+00	142	39	301	1	.850E-01
31	11 12	1 .1	146E+01	87	25	301	1	.640E-01	143	39	301	1	.770E-01
32	11 155	4 .1	L14E+01	88	26	27	1	.129E+01	144	40	41	1	.146E+01
33	11 301	1 .8	370E-01	89	26	170	4	.144E+01	145	40	184	4	.114E+01
34	11 301	1 .9	910E-01	90	26	301	1	.101E+00	146	40	301	1	.850E-01
. 35	12 13	1 .1	146E+01	91	26	301	1	.850E-01	147	40	301	1	.750E-01
36	12 156	4 . 1	114E+01	92	27	28	1	.146E+01	148	41	42	1	.146E+01
37	12 301		360E-01	93		171	4	.114E+01	149	41	185	4	.114E+01
38	12 301		970E-01	94	27	301	1	.890E-01	150	41	301	1	.850E-01
39	13 14		146E+01	95	27	301	1	.810E-01	151	41	301	1	.730E-01
40	13 157		114E+01	96	28	29	ī	.146E+01	152	42	43	ī	.129E+01
41	13 301		350E-01	97		172	4	.114E+01	153	42	186	4	.114E+01
42	13 301		100E+00	98	28	301	i	.880E-01	154	42	301	i	.850E-01
43	14 15		146E+01	99	28	301	ī	.810E-01	155	42	301	1	.710E-01
44	14 158		114E+01	100	29	30	ī	.146E+01	156	43	44	1	.115E+01
45	14 301					173	4	.114E+01	157				
			350E-01	101						43	187	4	.144E+01
46	14 301		101E+00	102		301	1	.870E-01	158	43	301	1	.910E-01
47	15 16		146E+01	103	29	301	1	.820E-01	159	43	301	1	.124E+00
48	15 159		114E+01	104	30	31	1	.146E+01	160	44	45	1	.115E+01
49	15 301		350E-01	105		174	4	.114E+01	161	44	188	4	.144E+01
50	15 301		100E+00	106	30	301	1	.870E-01	162	44	301	1	.730E-01
51	16 17		146E+01	107		301	1	.830E-01	163	44	301	1	.920E-01
52	16 160		114E+01	108	31	32	1	.146E+01	164	45	46	1	.115E+01
53	16 301	1 .8	850E-01	109		175	4	.114E+01	165	45	189	4	.144E+01
54	16 301	1 .9	970E-01	110	31	301	1	.870E-01	166	45	301	1	.390E-01
						•							

55 17 18 1 .146E+01 111 31 301 1 .830E-01 167 46 47 1 .115E+01 56 17 161 4 .114E+01 112 32 33 1 .146E+01 168 46 190 4 .144E+01

Brnh	Erom: To	Tag Conduct	Dwnh	Exam To	Tag Conduct	Dwnh	Ever Co	Mag Condust
169	46 301	1 .150E+00		60 301	1 .860E-01		74 301	Tag Conduct
170	46 301		225	60 301		281		1 .138E+00
			226		1 .810E-01	282	74 301	1 .700E-01
171	47 48	1 .115E+01	227	61 62	1 .146E+01	283	75 76	1 .120E+01
172	47 191	4 .144E+01	228	61 205	4 .114E+01	284	75 219	4 .144E+01
173	47 301	1 .127E+00	229	61 301	1 .860E-01	285	75 301	1 .157E+00
174	47 301	1 .690E-01	230	61 301	1 .810E-01	286	75 30 1	1 .900E-01
175	48 49	1 .129E+01	231	62 63	1 .146E+01	287	76 77	1 .125E+01
176	48 192	4 .144E+01	232	62 206	4 .114E+01	288	76 220	4 .106E+01
177	48 301	1 .100E+00	233	62 301	1 .860E-01	289	76 301	1 .171E+00
178	48 301	1 .890E-01	234	62 301	1 .810E-01	290	76 301	1 .980E-01
179	49 50	1 .146E+01	235	63 64	1 .146E+01	291	77 78	1 .210E+01
180	49 193	4 .114E+01	236	63 207	4 .114E+01	292	77 221	4 .106E+01
181	49 301	1 .880E-01	237	63 301	1 .860E-01	293	77 301	1 .172E+00
182	49 301	1 .830E-01	238	63 301	1 .800E-01	294	77 301	1 .970E-01
183	50 51	1 .146E+01	239	64 65	1 .108E+01	295	78 79	1 .172E+01
184	50 194	4 .114E+01	240	64 208	4 .114E+01	296	78 222	4 .878E+00
185	50 301	1 .870E-01	241	64 301	1 .860E-01	297	78 301	1 .124E+00
186	50 301	1 .830E-01	242	64 301	1 .790E-01	298	78 301	1 .910E-01
187	51 52	1 .146E+01	243	65 66	1 .992E+00	299	79 80	1 .992E+00
188	51 195	4 .114E+01	244	65 209	4 .160E+01	300	79 223	4 .132E+01
189	51 301	1 .870E-01	245	65 301	1 .940E-01	301	79 301	1 .108E+00
190	51 301	1 .830E-01	246	65 301	1 .870E-01	302	79 301	1 .870E-01
191	52 53	1 .146E+01	247	66 67	1 .172E+01	303	80 81	1 .108E+01
192	52 196	4 .114E+01	248	66 210	4 .132E+01	304	80 224	4 .160E+01
193	52 301	1 .870E-01	249	66 301	1 .930E-01	305	80 301	1 .930E-01
194	52 301	1 .830E-01	250	66 301	1 .103E+00	306	80 301	1 .910E-01
195	53 54	1 .146E+01	251	67 68	1 .210E+01	307	81 82	1 .146E+01
196	53 197	4 .114E+01	252	67 211	4 .878E+00	308	81 225	4 .114E+01
197	53 301	1 .870E-01	253	67 301	1 .930E-01	309	81 301	1 .840E-01
198	53 301	1 .830E-01	254	67 301	1 .125E+00	310	81 301	1 .830E-01
199	54 55	1 .146E+01	255	68 69	1 .125E+01	311	82 83	1 .146E+01
200	54 198	4 .114E+01	256	68 212	4 .106E+01	312	82 226	4 .114E+01
201	54 301	1 .870E-01	257	68 301	1 .990E-01	313	82 301	1 .850E-01
202	54 301	1 .830E-01	258	68 301	1 .172E+00	314	82 301	1 .820E-01
203	55 56	1 .146E+01	259	69 70	1 .120E+01	315	83 84	1 .146E+01
204	55 199	4 .114E+01	260	69 213	4 .106E+01	316	83 227	4 .114E+01
205	55 301	1 .870E-01	261	69 301	1 .990E-01	317	83 301	1 .850E-01
206	55 301	1 .830E-01	262	69 301	1 .171E+00	318	83 301	1 .820E-01
207	56 57	1 .146E+01	263	70 71	1 .115E+01	319	84 85	1 .146E+01
208	56 200	4 .114E+01	264	70 214	4 .144E+01	320	84 228	4 .114E+01
209	56 301	1 .870E-01	265	70 301	1 .900E-01	321	84 301	1 .860E-01
210	56 301	1 .820E-01	266	70 301	1 .157E+00	322	84 301	1 .820E-01
211	57 58	1 .146E+01	267	71 72	1 .115E+01	323	85 86	1 .146E+01
212	57 201	4 .114E+01	268	71 215	4 .144E+01	324	85 229	4 .114E+01
213	57 301	1 .860E-01	269	71 301	1 .710E-01	325	85 301	1 .860E-01
214	57 301	1 .820E-01	270	71 301	1 .138E+00	326	85 301	1 .820E-01
215	58 59	1 .146E+01	271	72 73	1 .115E+01	327	86 87	1 .146E+01
216	58 202	4 .114E+01	272	72 216	4 .144E+01	328	86 230	4 .114E+01
217	58 301	1 .860E-01	273	72 301	1 .330E-01	329	86 301	1 .860E-01
218	58 301	1 .820E-01	274	72 301	1 .670E-01	330	86 301	1 .820E-01
219	59 60	1 .146E+01	275	73 74	1 .115E+01	331	87 88	1 .146E+01
220	59 203	4 .114E+01	276	73 217	4 .144E+01	332	87 231	4 .114E+01
221	59 301	1 .860E-01	277	73 301	1 .670E-01	333	87 301	1 .860E-01
222	59 301	1 .820E-01	278	73 301	1 .310E-01	334	87 301	1 .820E-01
223	60 61	1 .146E+01	279	74 75	1 .115E+01	335	88 89	1 .146E+01
224	60 204	4 .114E+01	280	74 218	4 .144E+01	336	88 232	4 .114E+01
								· ·
				•.				

Brnh From To Tag Conduct 378 88 301 1 .820E-01 39 102 301 1 .90E-01 49 116 301 1 .830E-01 388 89 90 1 .146E+01 395 103 247 4 .114E+01 450 117 118 1 .146E+01 390 89 90 1 .146E+01 395 103 247 4 .114E+01 450 117 118 1 .146E+01 340 89 233 4 .114E+01 395 103 301 1 .760E-01 45 217 301 1 .830E-01 341 89 301 1 .810E-01 399 104 248 4 .114E+01 451 117 301 1 .830E-01 342 89 301 1 .810E-01 399 104 248 4 .114E+01 45 117 301 1 .830E-01 343 90 91 1 .146E+01 400 104 301 1 .780E-01 45 118 302 1 .128E+01 344 90 234 4 .114E+01 400 104 301 1 .780E-01 456 118 301 1 .820E-01 345 90 301 1 .810E-01 402 105 106 1 .146E+01 45 118 301 1 .820E-01 346 90 301 1 .810E-01 402 105 106 1 .146E+01 45 118 301 1 .840E-01 347 91 92 1 .146E+01 40 105 301 1 .790E-01 456 118 301 1 .840E-01 348 91 235 4 .114E+01 40 105 301 1 .790E-01 456 118 301 1 .860E-01 349 91 301 1 .810E-01 40 105 301 1 .790E-01 460 119 301 1 .860E-01 350 91 301 1 .810E-01 40 105 301 1 .790E-01 460 119 301 1 .860E-01 350 92 301 1 .810E-01 40 105 301 1 .800E-01 461 119 301 1 .960E-01 351 92 93 1 .146E+01 407 106 250 4 .114EE+01 459 119 263 4 .14EE+01 352 92 236 4 .114E+01 40 105 105 301 1 .800E-01 461 120 201 1 .800E-01 353 92 301 1 .810E-01 40 105 105 301 1 .800E-01 461 120 264 4 .14EE+01 352 92 301 1 .810E-01 40 105 105 301 1 .800E-01 461 120 264 4 .14EE+01 353 92 301 1 .810E-01 40 107 108 1 .146E+01 462 120 301 1 .15E+01 354 93 301 1 .810E-01 410 107 108 1 .146E+01 461 120 264 4 .14EE+01 355 93 94 1 .14EE+01 41 107 251 4 .114EE+01 461 120 264 4 .14EE+01 356 93 237 4 .114E+01 41 107 251 4 .114EE+01 461 120 301 1 .13EE+00 358 93 301 1 .810E-01 410 107 108 1 .146E+01 461 120 301 1 .13EE+00 358 93 301 1 .810E-01 410 107 108 1 .146E+01 470 122 231 1 .115E+01 359 94 95 1 .146E+01 41 107 251 1 .800E-01 465 120 301 1 .13EE+00 357 93 301 1 .810E-01 410 107 108 1 .800E-01 465 120 301 1 .13EE+00 358 93 301 1 .810E-01 410 107 108 1 .800E-01 470 122 253 1 .115E+01 357 93 301 1 .810E-01 410 107 108 1 .800E-01 470 122 253 1 .146E+01 359 94 95 1 .146E+01 401 107 108 1 .800E-01 470 122 250 1 .146	Doub Even Me	Mag Canduati	Desh From To	Tag Conduct I	Brnh From To T	lag Conduct
338 83 001		-	Brnn From 10			
1						
1						
341 89 301 1 850e-01 397 103 301 1 840e-01 453 117 301 1 1.360e-01 389 104 105 1 1.46e+01 451 118 119 1.129e+01 343 90 91 1.46e+01 400 104 301 1 850e-01 460 104 301 1 850e-01 460 104 301 1 840e-01 457 118 301 1 840e-01 348 90 301 1 850e-01 401 103 105 1.46e+01 401 105 301 1 840e-01 458 119 203 1.46e+01 404 105 301 1.830e-01 460 119 301 1.816e-01 401 105 301 1.830e-01 460 106 107 1.46e+01 401 104 107 106 220 1.416e-01 410 107 106 106 107 1						
1	340 89 233			1		
144 90 214 4 .114E+01 400 104 301 1 .780E-01 455 118 262 4 .114E+01 345 90 301 1 .810E-01 401 104 301 1 .840E-01 457 118 301 1 .840E-01 346 90 301 1 .810E-01 402 105 106 1 .146E+01 459 119 205 1 .115E+01 348 91 235 4 .114E+01 404 105 301 1 .790E-01 460 119 301 1 .860E-01 350 91 301 1 .810E-01 405 105 301 1 .300E-01 461 119 301 1 .860E-01 350 91 301 1 .810E-01 406 106 107 1 .146E+01 462 120 121 1 .115E+01 350 92 31 .146E+01 407 106 250 4 .114E+01 462 120 121 1 .115E+01 352 92 236 4 .114E+01 408 106 301 1 .810E-01 464 120 301 1 .650E-01 353 92 301 1 .850E-01 409 106 301 1 .810E-01 466 107 108 301 1 .810E-01 464 120 301 1 .550E-01 355 93 94 1 .146E+01 411 107 205 4 .114E+01 466 120 301 1 .550E-01 355 93 301 1 .810E-01 410 107 108 1 .146E+01 466 121 301 1 .115E+01 355 93 301 1 .810E-01 410 107 108 1 .146E+01 466 121 122 1 .115E+01 355 93 301 1 .810E-01 410 107 108 1 .146E+01 468 121 301 1 .220E-01 357 93 301 1 .850E-01 413 107 301 1 .830E-01 468 121 301 1 .220E-01 357 93 301 1 .850E-01 414 108 109 1 .146E+01 470 122 123 1 .115E+01 356 93 237 4 .114E+01 412 107 301 1 .830E-01 468 121 301 1 .320E-01 359 94 95 1 .146E+01 416 108 301 1 .830E-01 467 121 225 4 .144E+01 356 93 237 4 .114E+01 416 108 301 1 .830E-01 470 122 123 1 .115E+01 360 94 238 4 .114E+01 416 108 301 1 .830E-01 470 122 123 1 .115E+01 363 95 96 1 .146E+01 416 108 301 1 .830E-01 470 122 123 1 .115E+01 363 95 96 1 .146E+01 418 109 100 1 .146E+01 470 122 123 1 .146E+01 366 95 301 1 .810E-01 422 109 301 1 .830E-01 477 122 266 4 .144E+01 366 95 301 1 .810E-01 422 109 301 1 .830E-01 477 122 268 4 .144E+01 369 96 301 1 .830E-01 423 100 254 4 .114E+01 479 125 126 1 .146E+01 370 98 301 1 .15E+01 423 110 254 4 .114E+01 479 125 126 1 .146E+01 370 98 301 1 .15E+01 423 110 301 1 .830E-01 470 122 123 301 1 .400E-01 370 98 301 1 .15E+01 423 110 301 1 .830E-01 488 122 301 1 .800E-01 370 98 301 1 .15E+01 423 110 301 1 .830E-01 489 127 301 1 .800E-01 370 98 301 1 .15E+01 433 112 301 1 .830E-01 489 127 301 1 .800E-01 370 99 301 1 .15E+01 433 112 301 1 .830E-01 489 127 301	341 89 301	1 .850E-01	397 103 301	1 .840E-01		
344 90 234 4 114E+01 400 104 301 1 780E-01 456 118 301 1 820E-01 345 90 301 1 850E-01 402 105 106 1 146E+01 458 119 120 1 1.15E+01 347 91 92 1 .146E+01 403 105 249 4 .114E+01 458 119 120 1 .115E+01 348 91 235 4 .114E+01 404 105 301 1 .830E-01 406 106 107 1 .146E+01 458 119 301 1 .850E-01 349 91 301 1 .810E-01 405 105 301 1 .830E-01 406 106 107 1 .146E+01 461 119 301 1 .960E-01 350 91 301 1 .810E-01 406 106 107 1 .146E+01 462 120 121 1.115E+01 351 92 93 1 .146E+01 407 106 250 4 .114E+01 463 120 264 4 .144E+01 352 92 266 4 .114E+01 408 106 301 1 .810E-01 464 120 301 1 .650E-01 353 92 301 1 .850E-01 409 106 301 1 .830E-01 466 121 122 1 .115E+01 355 93 94 1 .146E+01 411 107 108 1 .146E+01 466 121 122 1 .115E+01 355 93 94 1 .146E+01 411 107 251 4 .114E+01 467 121 265 4 .144E+01 356 93 237 4 .114E+01 412 107 301 1 .830E-01 468 121 122 1 .115E+01 355 93 94 1 .146E+01 411 107 301 1 .830E-01 468 121 121 11.5E+01 358 93 301 1 .810E-01 414 108 109 1 .146E+01 470 122 123 1 .115E+01 360 94 238 4 .114E+01 415 108 252 4 .114E+01 470 122 123 1 .115E+01 360 94 238 4 .114E+01 415 108 252 4 .114E+01 470 122 123 1 .115E+01 360 94 301 1 .830E-01 417 108 301 1 .830E-01 470 122 123 1 .115E+01 363 95 96 1 .146E+01 418 109 110 1 .146E+01 470 122 123 1 .115E+01 363 95 96 1 .146E+01 410 109 301 1 .830E-01 477 122 266 4 .144E+01 363 95 96 1 .146E+01 420 109 301 1 .830E-01 477 122 267 4 .144E+01 369 96 301 1 .830E-01 418 109 301 1 .830E-01 477 122 267 4 .144E+01 369 96 301 1 .830E-01 422 110 301 1 .830E-01 477 122 267 4 .144E+01 369 96 301 1 .830E-01 422 110 301 1 .830E-01 476 124 125 1 .129E+01 379 98 10 1 .15E+01 427 110 25 4 .114E+01 475 122 267 4 .144E+01 379 98 301 1 .830E-01 422 110 301 1 .830E-01 476 124 125 1 .146E+01 379 98 301 1 .830E-01 422 110 301 1 .830E-01 476 124 125 1 .146E+01 379 99 301 1 .15E+01 427 111 255 4 .146E+01 490 127 301 1 .940E-01 379 99 301 1 .15E+01 427 111 255 4 .146E+01 490 127 301 1 .940E-01 379 99 301 1 .15E+01 427 111 255 4 .14E+01 490 127 301 1 .940E-01 379 99 301 1 .15E+01 435 113 301 1 .830E-01 490 123	342 89 301	1 .810E-01	398 104 105	1 .146E+01		1 .129E+01
1	343 90 91	1 .146E+01	399 104 248	4 .114E+01	455 118 262	4 .114E+01
1	344 90 234	4 .114E+01	400 104 301	1 .780E-01	456 118 301	1 .820E-01
146 90 301	345 90 301	1 .850E-01	401 104 301	1 .840E-01	457 118 301	1 .840E-01
348 91 295 4 .146E+01 403 105 249 4 .114E+01 459 119 263 4 .144E+01 301 1 .850E-01 405 105 301 1 .850E-01 405 105 301 1 .850E-01 406 106 107 1 .146E+01 460 119 301 1 .960E-01 350 91 301 1 .146E+01 406 106 301 1 .146E-01 462 120 121 .115E+01 353 92 301 1 .850E-01 409 106 301 1 .810E-01 465 120 301 1 .15E-01 355 93 94 1 .146E+01 412 107 301 1 .810E-01 413 107 301 1 .820E-01 466 121 301 1 .132E-01 356 93 237 4			402 105 106	1 .146E+01	458 119 120	1 .115E+01
348 91 235 4 .114E+01 405 105 301 1 .850E-01 461 119 301 1 .850E-01 405 105 301 1 .850E-01 461 119 301 1 .810E-01 461 119 301 1 .810E-01 406 106 107 1 .146E+01 462 120 121 1 .115E+01 353 92 301 1 .850E-01 409 106 301 1 .810E-01 465 120 301 1 .115E+01 355 92 301 1 .850E-01 411 107 251 4 .114E+01 465 121 225 4 .114E+01 465 121 30			403 105 249	4 .114E+01	459 119 263	4 .144E+01
1				1 .790E-01	460 119 301	1 .860E-01
1					461 119 301	1 .960E-01
351 92 93 1 146E+01 407 106 250 4 114E+01 463 120 264 4 1.14E+01 352 92 236 4 1.14E+01 408 106 301 1 .810E-01 464 120 301 1 .650E-01 353 92 301 1 .850E-01 409 106 301 1 .830E-01 465 120 301 1 .113E+00 354 92 301 1 .850E-01 410 107 108 1 .146E+01 465 120 301 1 .113E+00 355 93 94 1 .146E+01 411 107 108 1 .146E+01 467 121 265 4 .144E+01 356 93 237 4 .114E+01 412 107 301 1 .820E-01 468 121 301 1 .220E-01 357 93 301 1 .850E-01 413 107 301 1 .830E-01 468 121 301 1 .220E-01 358 93 301 1 .850E-01 414 108 109 1 .146E+01 470 122 1 .115E+01 359 94 95 1 .146E+01 415 108 252 4 .114E+01 471 122 264 4 .144E+01 471 122 301 1 .220E-01 416 108 301 1 .840E-01 472 122 301 1 .420E-01 475 123 301 1 .850E-01 417 108 301 1 .840E-01 475 123 301 1 .420E-01 475 123 301 1 .420E-01 475 123 301 1 .420E-01 475 123 301 1 .440E-01 475 123 301		9				
352 92 236		1			463 120 264	
353 92 301 1 .850E-01 409 106 301 1 .830E-01 465 120 301 1 .115E+001 354 92 301 1 .810E-01 410 107 108 1 .146E+01 466 121 122 1 .115E+01 356 93 237 4 .114E+01 412 107 301 1 .820E-01 468 121 301 1 .220E-01 357 93 301 1 .850E-01 413 107 301 1 .820E-01 468 121 301 1 .220E-01 358 93 301 1 .850E-01 413 107 301 1 .830E-01 468 121 301 1 .220E-01 358 93 301 1 .810E-01 413 107 301 1 .830E-01 469 121 301 1 .135E+00 358 93 301 1 .850E-01 413 107 301 1 .830E-01 469 121 301 1 .135E+01 359 94 95 1 .146E+01 415 108 252 4 .114E+01 470 122 123 1 .115E+01 360 94 238 4 .114E+01 416 108 301 1 .840E-01 472 122 301 1 .420E-01 361 94 301 1 .850E-01 418 109 110 1 .146E+01 471 122 266 4 .144E+01 362 94 301 1 .810E-01 418 109 110 1 .146E+01 473 123 124 1 .115E+01 363 95 96 1 .146E+01 419 109 253 4 .114E+01 475 123 301 1 .760E-01 364 95 239 4 .114E+01 420 109 301 1 .850E-01 476 124 125 1 .129E+01 366 95 301 1 .850E-01 421 109 301 1 .850E-01 476 124 125 1 .129E+01 366 95 301 1 .850E-01 421 109 301 1 .850E-01 477 124 268 4 .144E+01 366 95 301 1 .850E-01 422 110 111 1 .146E+01 478 124 301 1 .940E-01 369 96 301 1 .840E-01 422 110 111 1 .146E+01 478 124 301 1 .940E-01 369 96 301 1 .840E-01 425 110 301 1 .850E-01 470 124 268 4 .144E+01 372 97 241 4 .144E+01 422 110 301 1 .850E-01 480 125 269 4 .114E+01 372 97 241 4 .144E+01 428 111 301 1 .850E-01 480 125 269 4 .114E+01 373 97 301 1 .930E-01 426 111 112 1 .146E+01 481 125 301 1 .490E-01 375 98 99 1 .15E+01 413 112 256 4 .114E+01 486 126 301 1 .860E-01 375 98 99 1 .15E+01 413 112 256 4 .114E+01 486 126 301 1 .860E-01 375 98 99 100 1 .15E+01 413 112 256 4 .114E+01 481 125 301 1 .860E-01 375 98 99 100 1 .15E+01 413 112 256 4 .114E+01 486 126 301 1 .860E-01 375 98 99 10 1 .19E+00 434 113 114 1.46E+01 489 127 301 1 .850E-01 489 127 301 1 .850E-01 380 99 243 4 .144E+01 436 113 301 1 .830E-01 488 127 371 4 .114E+01 385 100 301 1 .250E-01 437 113 301 1 .850E-01 489 127 301 1 .850E-01 385 100 301 1 .19E+00 443 113 301 1 .850E-01 499 128 129 1 .146E+01 385 100 301 1 .19E+00 448 115 301 1 .850E-01 499 120		1				
354 92 301 1 .810E-01 410 107 108 1 1 .146E+01 466 121 122 1 .115E+01 355 93 94 1 .146E+01 412 107 301 1 .820E-01 468 121 301 1 .220E-01 357 93 301 1 .810E-01 413 107 301 1 .830E-01 469 121 301 1 .220E-01 359 94 95 1 .146E+01 415 108 252 4 .144E+01 470 122 123 1 .115E+01 360 94 238 4 .114E+01 416 108 301 1 .840E-01 471 122 266 4 .144E+01 361 94 301 1 .850E-01 418 109 110 1 .840E-01 472 122 301 1 .420E-01 362 94 301 1 .850E-01 418 109 110 1 .146E+01 472 122 301 1 .420E-01 363 95 96 1 .146E+01 419 109 253 4 .114E+01 475 123 301 1 .760E-01 364 95 239 4 .114E+01 420 109 301 1 .850E-01 476 124 125 1 .129E+01 366 95 301 1 .850E-01 422 110 301 1 .830E-01 477 124 268 4 .144E+01 368 96 240 4 .114E+01 422 110 301 1 .830E-01 476 124 125 1 .129E+01 369 96 301 1 .840E-01 423 110 254 4 .114E+01 479 125 126 1 .146E+01 370 96 301 1 .800E-01 425 110 301 1 .850E-01 481 125 301 1 .490E-01 370 96 301 1 .800E-01 425 110 301 1 .850E-01 481 125 301 1 .490E-01 370 96 301 1 .800E-01 425 110 301 1 .830E-01 481 125 301 1 .800E-01 374 97 301 1 .900E-01 425 110 301 1 .830E-01 481 125 301 1 .800E-01 374 97 301 1 .900E-01 426 111 112 1 .146E+01 482 125 301 1 .800E-01 374 97 301 1 .900E-01 425 110 301 1 .830E-01 481 125 301 1 .800E-01 374 97 301 1 .900E-01 426 111 112 1 .146E+01 483 126 127 1 .146E+01 373 97 301 1 .900E-01 425 110 301 1 .830E-01 481 125 301 1 .860E-01 375 98 99 1 .115E+01 425 112 301 1 .850E-01 481 127 171 416E+01 381 99 301 1 .660E-01 433 112 301 1 .850E-01 481 127 371 4 .146E+01 381 99 301 1 .660E-01 433 112 301 1 .850E-01 481 127 301 1 .860E-01 383 100 101 1 .15E+01 435 113 257 4 .114E+01 495 129 301 1 .860E-01 384 100 244 4 .144E+01 445 113 301 1 .850E-01 489 127 301 1 .800E-01 383 100 101 1 .15E+01 443 115 256 4 .14E+01 495 129 301 1 .800E-01 383 100 101 1 .15E+01 443 115 256 4 .14E+01 495 129 301 1 .800E-01 384 100 244 4 .144E+01 440 114 301 1 .850E-01 499 128 301 1 .16E+01 384 100 244 4 .144E+01 440 114 301 1 .850E-01 499 129 301 1 .146E+01 388 100 301 1 .380E-01 441 115 301 1 .830E-01 499 130 31 1 .146E+01 389 100 301						
355 93 94 1 .146E+01 411 107 251 4 .114E+01 467 121 265 4 .144E+01 356 93 237 4 .114E+01 412 107 301 1 .830E-01 468 121 301 1 .220E-01 357 93 301 1 .850E-01 413 107 301 1 .830E-01 469 121 301 1 .220E-01 358 93 301 1 .810E-01 414 108 109 1 .146E+01 470 122 123 1 1.115E+01 359 94 95 1 .146E+01 415 108 252 4 .114E+01 470 122 123 1 .115E+01 360 94 238 4 .114E+01 416 108 301 1 .840E-01 472 122 301 1 .420E-01 361 94 301 1 .850E-01 417 108 301 1 .830E-01 473 123 124 1 .115E+01 362 94 301 1 .850E-01 418 109 110 1 .146E+01 473 123 124 1 .115E+01 362 95 96 1 .146E+01 419 109 253 4 .114E+01 475 123 301 1 .760E-01 364 95 239 4 .114E+01 420 109 301 1 .850E-01 476 124 125 1 .129E+01 366 95 301 1 .850E-01 421 109 301 1 .850E-01 476 124 125 1 .129E+01 366 95 301 1 .850E-01 421 109 301 1 .850E-01 476 124 125 1 .129E+01 366 95 301 1 .850E-01 421 109 301 1 .850E-01 477 124 268 4 .144E+01 367 96 97 1 .129E+01 423 110 254 4 .114E+01 478 124 301 1 .940E-01 368 96 240 4 .114E+01 424 110 301 1 .850E-01 480 125 269 4 .114E+01 369 96 301 1 .840E-01 425 110 301 1 .850E-01 480 125 269 4 .114E+01 370 96 301 1 .800E-01 426 111 112 1 .146E+01 483 126 127 1 .146E+01 372 97 241 4 .144E+01 428 111 301 1 .830E-01 481 125 301 1 .860E-01 371 97 98 1 .115E+01 427 112 255 4 .114E+01 483 126 127 1 .146E+01 376 98 242 4 .144E+01 428 111 301 1 .830E-01 488 127 271 4 .146E+01 376 98 242 4 .144E+01 428 111 301 1 .850E-01 488 127 271 4 .114E+01 378 98 301 1 .930E-01 430 112 113 1 .146E+01 488 127 271 4 .114E+01 378 98 301 1 .123E+00 434 113 114 1 .146E+01 490 127 301 1 .860E-01 379 99 100 1 .115E+01 435 113 257 4 .114E+01 491 128 129 1 .146E+01 381 99 301 1 .260E-01 433 112 301 1 .850E-01 489 127 301 1 .850E-01 414 115 11 .146E+01 490 127 301 1 .850E-01 414 114 301 1 .850E-01 490 127 301 1 .850E-01 414 114 301 1 .850E-01 490 127 301 1 .850E-01 414 114 301 1 .850E-01 490 127 301 1 .850E-01 414 114 301 1 .850E-01 490 127 301 1 .850E-01 414 114 301 1 .850E-01 490 127 301 1 .860E-01 381 100 101 1 .115E+01 435 114 259 4 .114E+01 490 127 301 1 .850E-01 414 114						
356 93 237 4 .114E+01 412 107 301 1 .820E-01 468 121 301 1 .220E-01 357 93 301 1 .850E-01 413 107 301 1 .830E-01 469 121 301 1 .133E+00 358 93 301 1 .850E-01 414 108 109 1 .146E+01 470 122 123 1 .115E+01 359 94 95 1 .146E+01 416 108 252 4 .114E+01 471 122 266 4 .144E+01 360 94 238 4 .114E+01 416 108 301 1 .840E-01 472 122 301 1 .420E-01 362 94 301 1 .850E-01 417 108 301 1 .830E-01 473 122 301 1 .420E-01 362 94 301 1 .850E-01 417 108 301 1 .840E-01 473 122 267 4 .144E+01 363 95 96 1 .146E+01 419 109 253 4 .114E+01 474 123 267 4 .144E+01 363 95 96 1 .146E+01 419 109 253 4 .114E+01 475 123 301 1 .760E-01 365 95 301 1 .850E-01 421 109 301 1 .850E-01 477 124 268 4 .144E+01 366 95 301 1 .850E-01 421 109 301 1 .830E-01 477 124 268 4 .144E+01 368 96 240 4 .114E+01 424 110 301 1 .850E-01 480 125 269 4 .114E+01 369 96 301 1 .800E-01 425 110 301 1 .850E-01 480 125 269 4 .114E+01 373 97 301 1 .800E-01 425 110 301 1 .850E-01 480 125 301 1 .490E-01 370 96 301 1 .800E-01 425 110 301 1 .850E-01 480 125 301 1 .860E-01 371 97 98 1 .115E+01 427 112 256 4 .114E+01 482 125 301 1 .860E-01 373 97 301 1 .900E-01 425 110 301 1 .850E-01 483 126 127 1 .146E+01 373 97 301 1 .900E-01 426 111 112 1 .146E+01 482 125 301 1 .860E-01 373 97 301 1 .900E-01 429 111 301 1 .850E-01 485 126 301 1 .680E-01 375 98 99 1 .115E+01 427 112 256 4 .114E+01 487 127 128 1 .146E+01 376 98 242 4 .144E+01 428 113 301 1 .850E-01 488 126 270 4 .114E+01 377 98 301 1 .900E-01 433 112 301 1 .850E-01 489 127 301 1 .860E-01 379 99 100 1 .115E+01 435 113 301 1 .850E-01 489 127 301 1 .860E-01 379 99 100 1 .115E+01 435 113 301 1 .850E-01 489 127 301 1 .860E-01 379 99 100 1 .115E+01 435 113 301 1 .850E-01 499 127 301 1 .850E-01 433 112 301 1 .850E-01 499 127 301 1 .850E-01 384 100 244 4 .144E+01 440 114 301 1 .850E-01 499 127 301 1 .850E-01 385 100 301 1 .15E+01 443 113 301 1 .850E-01 499 128 301 1 .900E-01 385 100 301 1 .15E+01 443 115 301 1 .850E-01 499 129 301 1 .860E-01 386 101 102 1 .115E+01 445 115 301 1 .850E-01 499 129 301 1 .860E-01 386 101 102 1 .115E+01 440 114						
357 93 301 1 .850E-01 413 107 301 1 .830E-01 469 121 301 1 .133E+00 358 93 301 1 .810E-01 414 108 109 1 .146E+01 470 122 123 1 .115E+01 360 94 238 4 .114E+01 416 108 301 1 .840E-01 472 122 301 1 .420E-01 361 94 301 1 .850E-01 417 108 301 1 .830E-01 473 123 124 1 .115E+01 362 94 301 1 .810E-01 418 109 110 1 .146E+01 473 123 124 1 .115E+01 363 95 96 1 .146E+01 419 109 253 4 .114E+01 475 123 301 1 .760E-01 364 95 239 4 .114E+01 420 109 301 1 .850E-01 476 124 125 1 .129E+01 365 95 301 1 .850E-01 421 109 301 1 .850E-01 476 124 125 1 .129E+01 366 95 301 1 .850E-01 421 109 301 1 .850E-01 476 124 125 1 .129E+01 367 96 97 1 .129E+01 423 110 254 4 .114E+01 479 125 126 1 .146E+01 368 96 240 4 .114E+01 424 110 301 1 .850E-01 481 125 269 4 .114E+01 369 96 301 1 .840E-01 425 110 301 1 .850E-01 481 125 301 1 .490E-01 370 96 301 1 .800E-01 426 111 112 1 .146E+01 479 125 126 1 .146E+01 372 97 241 4 .144E+01 426 111 12 1 .146E+01 483 126 127 1 .146E+01 373 97 301 1 .900E-01 428 111 301 1 .850E-01 484 126 270 4 .114E+01 373 97 301 1 .900E-01 428 111 301 1 .850E-01 484 126 270 4 .114E+01 374 97 301 1 .930E-01 429 111 301 1 .850E-01 484 126 270 4 .114E+01 375 98 99 1 .115E+01 437 112 256 4 .114E+01 487 127 128 1 .146E+01 376 98 242 4 .144E+01 432 112 301 1 .850E-01 488 127 301 1 .680E-01 376 98 242 4 .144E+01 432 112 301 1 .850E-01 488 127 301 1 .680E-01 378 98 301 1 .23E+00 434 113 114 1.146E+01 490 127 301 1 .860E-01 378 98 301 1 .23E+00 434 113 114 1 .146E+01 490 127 301 1 .850E-01 380 99 243 4 .144E+01 436 113 301 1 .830E-01 493 128 301 1 .900E-01 381 100 101 1 .115E+01 437 113 301 1 .850E-01 489 127 301 1 .850E-01 381 100 101 1 .115E+01 437 113 301 1 .850E-01 490 127 301 1 .850E-01 381 100 101 1 .115E+01 437 113 301 1 .850E-01 490 128 272 4 .114E+01 381 100 301 1 .380E-01 441 114 301 1 .850E-01 490 129 301 1 .850E-01 382 100 301 1 .13EE+01 443 115 301 1 .850E-01 490 129 301 1 .900E-01 383 100 101 1 .115E+01 437 115 259 4 .114E+01 495 129 301 1 .900E-01 384 100 244 4 .14						
358 93 301 1 .810E-01 414 108 109 1 .146E+01 470 122 123 1 .115E+01 359 94 95 1 .146E+01 415 108 252 4 .114E+01 471 122 266 4 .144E+01 360 94 238 4 .114E+01 416 108 301 1 .830E-01 472 122 301 1 .420E-01 361 94 301 1 .850E-01 417 108 301 1 .830E-01 472 122 301 1 .420E-01 362 94 301 1 .810E-01 418 109 110 1 .146E+01 474 123 267 4 .144E+01 363 95 96 1 .146E+01 419 109 253 4 .114E+01 475 123 301 1 .760E-01 364 95 239 4 .114E+01 420 109 301 1 .850E-01 476 124 125 1 .129E+01 365 95 301 1 .850E-01 421 109 301 1 .850E-01 476 124 125 1 .129E+01 366 95 301 1 .810E-01 422 110 111 1 .146E+01 478 124 301 1 .940E-01 368 96 240 4 .114E+01 422 110 111 1 .146E+01 479 125 126 1 .146E+01 369 96 301 1 .840E-01 425 110 301 1 .850E-01 480 125 269 4 .114E+01 373 97 301 1 .800E-01 425 110 301 1 .830E-01 480 125 269 4 .114E+01 373 97 301 1 .900E-01 428 111 301 1 .850E-01 481 125 301 1 .860E-01 373 97 301 1 .900E-01 429 111 301 1 .850E-01 481 125 301 1 .860E-01 373 97 301 1 .900E-01 429 111 301 1 .850E-01 486 126 301 1 .860E-01 375 98 99 1 .115E+01 428 121 301 1 .850E-01 486 126 301 1 .860E-01 377 98 301 1 .900E-01 429 111 301 1 .850E-01 486 126 301 1 .860E-01 379 99 100 1 .15E+01 433 112 256 4 .114E+01 487 127 128 1 .146E+01 380 99 243 4 .144E+01 433 112 301 1 .850E-01 488 127 271 4 .146E+01 380 99 243 4 .144E+01 436 113 301 1 .850E-01 489 127 301 1 .850E-01 380 99 243 4 .144E+01 436 113 301 1 .850E-01 489 127 301 1 .850E-01 380 99 243 4 .144E+01 436 113 301 1 .850E-01 499 128 372 4 .114E+01 381 99 301 1 .260E-01 437 113 301 1 .850E-01 499 128 372 4 .114E+01 381 99 301 1 .15E+01 436 113 301 1 .850E-01 499 128 371 4 .114E+01 381 100 24 4 .144E+01 440 141 301 1 .850E-01 499 130 11 .15E+01 381 100 101 1 .15E+01 430 113 301 1 .850E-01 499 130 11 .146E+01 381 100 24 4 .144E+01 440 114 301 1 .850E-01 499 130 131 1 .146E+01 381 100 24 4 .144E+01 440 114 301 1 .850E-01 499 130 131 1 .146E+01 381 100 301 1 .19E-01 445 115 301 1 .830E-01 499 130 131 1 .146E+01 388 101 301 1 .19E-01 445 115 301 1 .840E-01 499 130 131 1 .146E+01 388 101 301 1 .790						
359 94 95 1 .146E+01 415 108 252 4 .114E+01 471 122 266 4 .144E+01 360 94 238 4 .114E+01 416 108 301 1 .840E-01 472 122 301 1 .420E-01 361 94 301 1 .850E-01 417 108 301 1 .830E-01 473 123 124 1 .115E+01 363 95 96 1 .146E+01 419 109 253 4 .114E+01 475 123 301 1 .760E-01 364 95 239 4 .114E+01 420 109 301 1 .850E-01 476 124 125 1 .129E+01 365 95 301 1 .850E-01 421 109 301 1 .850E-01 476 124 125 1 .129E+01 366 95 301 1 .850E-01 422 110 111 1 .146E+01 478 124 301 1 .940E-01 366 95 301 1 .810E-01 422 110 111 1 .146E+01 478 124 301 1 .940E-01 366 95 301 1 .810E-01 422 110 301 1 .850E-01 477 124 268 4 .144E+01 368 96 240 4 .114E+01 424 110 301 1 .850E-01 480 125 269 4 .114E+01 369 96 301 1 .840E-01 425 110 301 1 .850E-01 480 125 269 4 .114E+01 369 96 301 1 .840E-01 425 110 301 1 .850E-01 481 125 301 1 .490E-01 370 96 301 1 .800E-01 426 111 112 1 .146E+01 482 125 301 1 .860E-01 371 97 98 1 .115E+01 427 111 255 4 .114E+01 483 126 127 1 .146E+01 372 97 241 4 .144E+01 428 111 301 1 .850E-01 481 125 301 1 .860E-01 374 97 301 1 .930E-01 420 111 301 1 .830E-01 485 126 301 1 .660E-01 375 98 99 1 .115E+01 431 112 256 4 .114E+01 486 126 301 1 .660E-01 375 98 242 4 .144E+01 432 112 301 1 .830E-01 488 127 271 4 .114E+01 379 98 301 1 .690E-01 433 112 256 4 .114E+01 487 127 128 1 .146E+01 388 98 301 1 .690E-01 433 112 301 1 .850E-01 488 127 271 4 .114E+01 381 99 301 1 .23E+00 434 113 114 1 .146E+01 490 128 129 1 .146E+01 381 99 301 1 .15E+01 435 113 301 1 .850E-01 489 127 301 1 .850E-01 383 100 101 1 .115E+01 435 113 301 1 .850E-01 490 128 272 4 .114E+01 381 100 244 4 .144E+01 436 113 301 1 .850E-01 490 128 272 4 .114E+01 381 100 101 1 .15E+01 435 113 301 1 .850E-01 490 128 272 4 .114E+01 381 100 101 1 .15E+01 435 113 301 1 .850E-01 490 129 273 4 .114E+01 381 100 101 1 .15E+01 435 113 301 1 .850E-01 490 129 273 4 .114E+01 381 100 101 1 .15E+01 435 113 301 1 .850E-01 490 129 273 4 .114E+01 381 100 301 1 .192E-01 440 114 301 1 .850E-01 490 129 273 4 .114E+01 381 100 301 1 .192E-01 440 114 301 1 .850E-01 490 129 273 4 .114E+01 381 100						
360 94 238		1				
361 94 301 1 .850E-01 417 108 301 1 .830E-01 473 123 124 1 .115E+01 362 94 301 1 .810E-01 418 109 110 1 .146E+01 475 123 301 1 .760E-01 363 95 96 1 .146E+01 49 109 253 4 .114E+01 475 123 301 1 .760E-01 364 95 239 4 .114E+01 420 109 301 1 .850E-01 476 124 125 1 .129E+01 366 95 301 1 .850E-01 421 109 301 1 .830E-01 476 124 125 1 .129E+01 366 95 301 1 .850E-01 422 110 111 1 .146E+01 478 124 301 1 .940E-01 367 96 97 1 .129E+01 422 110 111 1 .146E+01 478 124 301 1 .940E-01 368 96 240 4 .114E+01 424 110 301 1 .850E-01 480 125 269 4 .114E+01 368 96 301 1 .800E-01 425 110 301 1 .830E-01 481 125 301 1 .890E-01 370 96 301 1 .800E-01 425 110 301 1 .830E-01 481 125 301 1 .890E-01 371 97 98 1 .115E+01 427 111 255 4 .114E+01 483 126 127 1 .146E+01 373 97 301 1 .900E-01 429 111 301 1 .850E-01 484 126 270 4 .114E+01 373 97 301 1 .900E-01 429 111 301 1 .850E-01 484 126 270 4 .114E+01 375 98 99 1 .115E+01 431 112 256 4 .114E+01 487 127 128 1 .146E+01 376 98 242 4 .144E+01 432 112 301 1 .850E-01 488 126 301 1 .680E-01 375 98 99 1 .115E+01 431 112 256 4 .114E+01 487 127 128 1 .146E+01 377 98 301 1 .930E-01 430 112 113 1 .146E+01 487 127 128 1 .146E+01 379 99 100 1 .115E+01 431 112 256 4 .114E+01 487 127 128 1 .146E+01 380 99 243 4 .144E+01 436 113 301 1 .850E-01 489 127 301 1 .850E-01 383 190 101 1 .15E+01 435 113 257 4 .114E+01 490 127 301 1 .850E-01 383 190 301 1 .260E-01 438 114 115 1 .146E+01 490 127 301 1 .850E-01 383 100 101 1 .15E+01 438 114 155 1 .146E+01 490 127 301 1 .850E-01 384 100 244 4 .144E+01 436 113 301 1 .850E-01 491 128 129 1 .146E+01 385 100 301 1 .195E+01 439 114 258 4 .114E+01 491 128 301 1 .910E-01 385 100 301 1 .195E+01 441 115 1 .146E+01 499 129 301 1 .970E-01 386 101 102 1 .115E+01 441 115 301 1 .850E-01 499 129 301 1 .970E-01 386 101 301 1 .720E-01 444 115 301 1 .850E-01 500 130 301 1 .970E-01 386 101 301 1 .720E-01 445 115 301 1 .830E-01 500 130 301 1 .300E+00 390 102 103 1 .129E+01 445 115 301 1 .830E-01 500 130 301 1 .146E+01 390 102 103 1 .129E+01 446 116 117 1 .146E+01 502 310 301 1 .146E+01 502 310						
362 94 301 1 .810E-01 418 109 110 1 .146E+01 474 123 267 4 .144E+01 363 95 96 1 .146E+01 419 109 253 4 .114E+01 476 124 125 1 1.760E-01 365 95 301 1 .850E-01 421 109 301 1 .850E-01 476 124 125 1 .129E+01 365 95 301 1 .850E-01 421 109 301 1 .830E-01 477 124 268 4 .144E+01 366 95 301 1 .810E-01 422 110 111 1 .146E+01 478 124 301 1 .940E-01 368 96 240 4 .114E+01 424 110 301 1 .850E-01 480 125 269 4 .114E+01 368 96 240 4 .114E+01 424 110 301 1 .850E-01 480 125 269 4 .114E+01 370 96 301 1 .800E-01 425 110 301 1 .830E-01 480 125 269 4 .114E+01 370 96 301 1 .800E-01 426 111 112 1 .146E+01 482 125 301 1 .490E-01 370 97 98 1 .115E+01 427 111 255 4 .114E+01 483 126 127 1 .146E+01 373 97 301 1 .900E-01 429 111 301 1 .850E-01 484 126 270 4 .114E+01 373 97 301 1 .900E-01 429 111 301 1 .830E-01 484 126 270 4 .114E+01 373 97 301 1 .900E-01 429 111 301 1 .830E-01 486 126 301 1 .860E-01 376 98 242 4 .144E+01 432 112 301 1 .850E-01 486 126 301 1 .860E-01 376 98 242 4 .144E+01 432 112 301 1 .850E-01 486 126 301 1 .860E-01 376 98 242 4 .144E+01 432 112 301 1 .850E-01 489 127 301 1 .800E-01 379 99 100 1 .115E+01 431 112 256 4 .114E+01 487 127 128 1 .146E+01 378 98 301 1 .690E-01 433 112 301 1 .830E-01 489 127 301 1 .800E-01 380 99 243 4 .144E+01 435 113 301 1 .830E-01 489 127 301 1 .850E-01 380 99 243 4 .144E+01 435 113 301 1 .830E-01 490 127 301 1 .850E-01 382 99 301 1 .149E+00 438 114 115 1 .146E+01 490 127 301 1 .850E-01 381 99 301 1 .149E+00 438 114 115 1 .146E+01 490 127 301 1 .850E-01 381 99 301 1 .149E+00 438 114 115 1 .146E+01 490 127 301 1 .840E-01 381 100 101 1 .15E+01 430 112 559 4 .114E+01 490 129 273 4 .114E+01 381 100 101 1 .15E+01 440 114 301 1 .850E-01 496 129 273 4 .114E+01 381 100 101 1 .15E+01 440 114 301 1 .850E-01 496 129 273 4 .114E+01 381 100 101 1 .15E+01 440 114 301 1 .850E-01 496 129 273 4 .114E+01 381 100 101 1 .15E+01 440 114 301 1 .850E-01 496 129 273 4 .114E+01 381 100 101 1 .15E+01 440 114 301 1 .850E-01 500 130 1 1 .900E-01 386 101 102 1 .115E+01 440 114 301 1 .850E-01 500 130 1 1 .900E-01 386 101 10						
363 95 96 1 .146E+01 419 109 253 4 .114E+01 475 123 301 1 .760E-01 364 95 239 4 .114E+01 420 109 301 1 .850E-01 476 124 125 1 .129E+01 366 95 301 1 .850E-01 421 109 301 1 .830E-01 477 124 268 4 .144E+01 366 95 301 1 .810E-01 422 110 111 1 .146E+01 478 124 301 1 .940E-01 367 96 97 1 .129E+01 423 110 254 4 .114E+01 479 125 126 1 .146E+01 368 96 240 4 .114E+01 425 110 301 1 .850E-01 480 125 269 4 .114E+01 369 96 301 1 .840E-01 425 110 301 1 .830E-01 481 125 301 1 .490E-01 370 96 301 1 .800E-01 425 110 301 1 .830E-01 481 125 301 1 .490E-01 371 97 98 1 .115E+01 427 111 255 4 .114E+01 483 126 127 1 .146E+01 373 97 301 1 .900E-01 429 111 301 1 .850E-01 485 126 301 1 .860E-01 374 97 301 1 .900E-01 429 111 301 1 .830E-01 485 126 301 1 .680E-01 375 98 99 1 .115E+01 431 112 256 4 .114E+01 486 126 301 1 .680E-01 375 98 99 1 .115E+01 431 112 256 4 .114E+01 488 127 27 1 4 .146E+01 377 98 301 1 .690E-01 433 112 301 1 .850E-01 488 127 271 4 .146E+01 379 99 100 1 .15E+01 431 132 256 4 .114E+01 488 127 271 4 .146E+01 379 99 100 1 .15E+01 435 113 257 4 .114E+01 491 128 129 1 .146E+01 381 99 301 1 .260E-01 437 113 301 1 .850E-01 489 127 301 1 .850E-01 382 99 301 1 .15E+01 435 113 257 4 .114E+01 491 128 129 1 .146E+01 381 99 301 1 .260E-01 437 113 301 1 .850E-01 492 128 272 4 .114E+01 381 100 244 4 .144E+01 436 113 301 1 .850E-01 492 128 272 4 .114E+01 381 100 244 4 .144E+01 436 113 301 1 .850E-01 492 128 272 4 .114E+01 381 100 244 4 .144E+01 436 113 301 1 .850E-01 492 128 272 4 .114E+01 381 100 244 4 .144E+01 440 144 301 1 .850E-01 495 129 301 1 .90E-01 386 101 102 1 .115E+01 430 114 258 4 .114E+01 495 129 301 1 .90E-01 386 101 102 1 .115E+01 442 115 116 1 .146E+01 499 129 301 1 .90E-01 388 101 301 1 .15E+01 442 115 116 1 .146E+01 499 129 301 1 .90E-01 388 101 301 1 .90E-01 444 115 301 1 .830E-01 496 129 273 4 .114E+01 388 101 301 1 .90E-01 444 115 301 1 .830E-01 499 129 301 1 .146E+01 389 101 301 1 .192E-01 444 115 301 1 .830E-01 500 130 274 4 .114E+01 389 101 301 1 .720E-01 445 115 301 1 .830E-01 500 130 1 1 .300E-01 390 102 246						
364 95 239 4 .114E+01 420 109 301 1 .850E-01 476 124 125 1 .129E+01 365 95 301 1 .850E-01 421 109 301 1 .830E-01 477 124 268 4 .144E+01 368 95 301 1 .810E-01 422 110 111 1 .146E+01 478 124 301 1 .940E-01 367 96 97 1 .129E+01 423 110 254 4 .114E+01 479 125 126 1 .146E+01 368 96 240 4 .114E+01 424 110 301 1 .850E-01 480 125 269 4 .114E+01 370 96 301 1 .800E-01 425 110 301 1 .850E-01 480 125 269 4 .114E+01 370 96 301 1 .800E-01 426 111 112 1 .146E+01 482 125 301 1 .860E-01 371 97 98 1 .115E+01 427 111 255 4 .114E+01 483 126 127 1 .146E+01 372 97 241 4 .144E+01 428 111 301 1 .850E-01 483 126 127 1 .146E+01 373 97 301 1 .930E-01 430 112 113 1 .146E+01 483 126 127 1 .146E+01 373 97 301 1 .930E-01 430 112 113 1 .146E+01 486 126 301 1 .660E-01 375 98 99 1 .115E+01 431 112 256 4 .114E+01 487 127 128 1 .146E+01 377 98 301 1 .690E-01 433 112 301 1 .850E-01 488 127 271 4 .114E+01 379 99 100 1 .15E+01 435 113 257 4 .114E+01 490 127 301 1 .820E-01 380 99 243 4 .144E+01 436 113 301 1 .850E-01 491 128 129 1 .146E+01 381 99 301 1 .260E-01 437 113 301 1 .850E-01 491 128 129 1 .146E+01 381 99 301 1 .260E-01 437 113 301 1 .850E-01 491 128 129 1 .146E+01 381 99 301 1 .260E-01 437 113 301 1 .850E-01 491 128 129 1 .146E+01 381 100 244 4 .144E+01 436 113 301 1 .850E-01 491 128 301 1 .910E-01 382 99 301 1 .149E+00 438 114 115 1 .146E+01 494 128 301 1 .910E-01 385 100 301 1 .380E-01 441 114 301 1 .850E-01 496 129 273 4 .114E+01 385 100 301 1 .380E-01 441 114 301 1 .850E-01 496 129 273 4 .114E+01 385 100 301 1 .380E-01 441 114 301 1 .850E-01 497 129 301 1 .970E-01 386 101 102 1 .115E+01 442 115 301 1 .850E-01 496 129 273 4 .114E+01 388 101 301 1 .920E-01 444 115 301 1 .850E-01 497 129 301 1 .970E-01 387 101 245 4 .144E+01 443 115 301 1 .850E-01 497 129 301 1 .970E-01 388 101 301 1 .920E-01 444 115 301 1 .850E-01 500 130 274 4 .114E+01 399 100 246 4 .144E+01 443 115 301 1 .850E-01 500 130 274 4 .114E+01 399 100 203 1 .129E+01 446 116 117 1 .146E+01 500 130 131 1.146E+01 390 102 246 4 .144E+01 447 116 260 4 .114E+01 500 130 131 1.146E+01		3				
365 95 301 1 .850E-01 421 109 301 1 .830E-01 477 124 268 4 .144E+01 366 95 301 1 .810E-01 422 110 111 1 .146E+01 478 124 301 1 .940E-01 368 96 240 4 .114E+01 424 110 301 1 .850E-01 480 125 269 4 .114E+01 369 96 301 1 .840E-01 425 110 301 1 .830E-01 480 125 269 4 .114E+01 370 96 301 1 .800E-01 425 110 301 1 .830E-01 481 125 301 1 .800E-01 371 97 98 1 .115E+01 427 111 255 4 .114E+01 482 125 301 1 .860E-01 372 97 241 4 .144E+01 428 111 301 1 .850E-01 484 126 270 4 .114E+01 373 97 301 1 .900E-01 429 111 301 1 .830E-01 485 126 301 1 .680E-01 374 97 301 1 .900E-01 429 111 301 1 .830E-01 485 126 301 1 .680E-01 375 98 99 1 .115E+01 431 112 256 4 .114E+01 487 127 128 1 .146E+01 377 98 301 1 .690E-01 433 112 301 1 .850E-01 488 127 271 4 .114E+01 379 98 301 1 .690E-01 433 112 301 1 .850E-01 488 127 271 4 .114E+01 379 98 301 1 .690E-01 433 112 301 1 .830E-01 489 127 301 1 .820E-01 379 99 100 1 .115E+01 435 113 257 4 .114E+01 490 127 301 1 .850E-01 380 99 243 4 .144E+01 436 113 301 1 .850E-01 490 127 301 1 .850E-01 381 99 301 1 .260E-01 437 113 301 1 .850E-01 491 128 129 1 .146E+01 381 99 301 1 .260E-01 437 113 301 1 .850E-01 493 128 301 1 .910E-01 383 100 101 1 .115E+01 439 114 258 4 .114E+01 494 128 301 1 .840E-01 384 100 244 4 .144E+01 436 113 301 1 .850E-01 494 128 301 1 .840E-01 385 100 301 1 .380E-01 441 114 301 1 .850E-01 495 129 130 1 .146E+01 385 100 301 1 .380E-01 441 114 301 1 .850E-01 497 129 301 1 .910E-01 386 101 102 1 .115E+01 449 112 559 4 .114E+01 499 130 131 1 .146E+01 388 101 301 1 .920E-01 444 115 301 1 .850E-01 497 129 301 1 .970E-01 386 101 102 1 .115E+01 443 115 259 4 .114E+01 499 130 131 1 .146E+01 388 101 301 1 .920E-01 444 115 301 1 .840E-01 500 130 274 4 .114E+01 399 102 246 4 .144E+01 445 116 117 1 .146E+01 500 130 1 1 .146E+01 399 102 246 4 .144E+01 447 116 260 4 .114E+01 500 130 1 1 .146E+01 500 130 1 1 .146E						
366 95 301 1 .810E-01 422 110 111 1 .146E+01 478 124 301 1 .940E-01 367 96 97 1 .129E+01 423 110 254 4 .114E+01 479 125 126 1 .146E+01 369 96 301 1 .840E-01 425 110 301 1 .830E-01 481 125 301 1 .490E-01 370 96 301 1 .840E-01 426 111 112 1 .146E+01 482 125 301 1 .490E-01 371 97 98 1 .115E+01 427 111 255 4 .114E+01 483 126 127 1 .146E+01 372 97 241 4 .144E+01 428 111 301 1 .850E-01 484 126 270 4 .114E+01 373 97 301 1 .900E-01 429 111 301 1 .830E-01 485 126 301 1 .680E-01 374 97 301 1 .900E-01 429 111 301 1 .830E-01 485 126 301 1 .680E-01 375 98 99 1 .115E+01 431 112 256 4 .114E+01 486 126 301 1 .680E-01 375 98 242 4 .144E+01 432 112 301 1 .850E-01 488 127 301 1 .860E-01 376 98 242 4 .144E+01 432 112 301 1 .850E-01 488 127 301 1 .820E-01 379 99 100 1 .15E+01 431 113 101 1 .830E-01 489 127 301 1 .820E-01 379 99 100 1 .115E+01 435 113 257 4 .114E+01 490 127 301 1 .820E-01 380 99 243 4 .144E+01 436 113 301 1 .850E-01 492 128 272 4 .114E+01 381 99 301 1 .260E-01 435 113 257 4 .114E+01 491 128 129 1 .146E+01 382 99 301 1 .149E+00 438 114 115 1 .146E+01 492 128 301 1 .910E-01 383 100 101 1 .115E+01 438 114 15 1 .146E+01 492 128 301 1 .910E-01 384 100 244 4 .144E+01 440 114 301 1 .850E-01 493 128 301 1 .910E-01 385 100 301 1 .380E-01 442 115 116 1 .146E+01 496 129 273 4 .114E+01 385 100 301 1 .380E-01 442 115 116 1 .146E+01 496 129 273 4 .114E+01 385 100 301 1 .380E-01 442 115 116 1 .146E+01 496 129 273 4 .114E+01 385 100 301 1 .380E-01 442 115 116 1 .146E+01 496 129 273 4 .114E+01 388 101 301 1 .920E-01 444 115 301 1 .830E-01 497 129 301 1 .970E-01 386 101 301 1 .720E-01 445 115 301 1 .840E-01 500 130 274 4 .114E+01 399 102 246 4 .144E+01 446 116 117 1 .146E+01 500 130 1 1 .146E+01 390 102 246 4 .144E+01 446 116 117 1 .146E+01 500 130 1 1 .146E+01 390 102 246 4 .144E+01 447 116 260 4 .114E+01 500 130 1 1 .146E+01 390 102 246 4 .144E+01 447 116 260 4 .114E+01 500 130 1 1 .146E+01 390 102 246 4 .144E+01 447 116 260 4 .114E+01 500 130 1 1 .146E+01 390 102 246 4 .144E+01 447 116 260 4 .114E+01 500 130 1 1 .146E+01 390 102 2						
367 96 97 1 .129E+01 423 110 254 4 .114E+01 479 125 126 1 .146E+01 368 96 240 4 .114E+01 424 110 301 1 .850E-01 480 125 269 4 .114E+01 369 96 301 1 .840E-01 425 110 301 1 .830E-01 481 125 301 1 .490E-01 370 96 301 1 .800E-01 426 111 112 1 .146E+01 482 125 301 1 .860E-01 371 97 241 4 .144E+01 428 111 301 1 .850E-01 483 126 127 1 .146E+01 373 97 301 1 .930E-01 430 112 131 1 .146E+01 486 126 301 1 .680E-01	• • • • • • • •					
368 96 240 4 .114E+01 424 110 301 1 .850E-01 480 125 269 4 .114E+01 369 96 301 1 .840E-01 425 110 301 1 .830E-01 481 125 301 1 .490E-01 370 96 301 1 .800E-01 426 111 112 1 .146E+01 482 125 301 1 .860E-01 371 97 98 1 .115E+01 427 111 255 4 .114E+01 483 126 127 1 .146E+01 372 97 241 4 .144E+01 428 111 301 1 .850E-01 484 126 270 4 .114E+01 373 97 301 1 .900E-01 429 111 301 1 .830E-01 485 126 301 1 .680E-01 374 97 301 1 .930E-01 429 111 301 1 .830E-01 485 126 301 1 .680E-01 375 98 99 1 .115E+01 431 112 256 4 .114E+01 487 127 128 1 .146E+01 376 98 242 4 .144E+01 432 112 301 1 .850E-01 488 127 271 4 .114E+01 377 98 301 1 .690E-01 433 112 301 1 .850E-01 488 127 271 4 .114E+01 379 99 100 1 .115E+01 435 113 257 4 .114E+01 490 127 301 1 .820E-01 378 98 301 1 .123E+00 434 113 114 1 .146E+01 490 127 301 1 .850E-01 380 99 243 4 .144E+01 436 113 301 1 .850E-01 491 128 129 1 .146E+01 381 99 301 1 .260E-01 437 113 301 1 .850E-01 491 128 129 1 .146E+01 381 99 301 1 .260E-01 437 113 301 1 .830E-01 492 128 272 4 .114E+01 381 99 301 1 .149E+00 438 114 115 1 .146E+01 491 128 129 1 .146E+01 384 100 244 4 .144E+01 430 1 1.850E-01 494 128 301 1 .910E-01 385 100 301 1 .380E-01 441 114 301 1 .850E-01 496 129 273 4 .114E+01 385 100 301 1 .380E-01 441 114 301 1 .850E-01 496 129 273 4 .114E+01 385 100 301 1 .380E-01 441 114 301 1 .850E-01 497 129 301 1 .970E-01 386 101 102 1 .115E+01 442 115 116 1 .146E+01 498 129 301 1 .970E-01 386 101 102 1 .115E+01 442 115 116 1 .146E+01 498 129 301 1 .970E-01 387 101 245 4 .144E+01 443 115 259 4 .114E+01 499 130 131 1 .146E+01 389 101 301 1 .720E-01 444 115 301 1 .840E-01 500 130 274 4 .114E+01 389 101 301 1 .720E-01 445 115 301 1 .840E-01 500 130 301 1 .140E+01 399 102 246 4 .144E+01 447 116 260 4 .114E+01 500 130 301 1 .146E+01 399 102 246 4 .144E+01 447 116 260 4 .114E+01 500 130 301 1 .146E+01 399 102 246 4 .144E+01 447 116 260 4 .114E+01 500 130 11 .146E+01						
369 96 301 1 .840E-01 425 110 301 1 .830E-01 481 125 301 1 .490E-01 370 96 301 1 .800E-01 426 111 112 1 .146E+01 482 125 301 1 .860E-01 371 97 98 1 .115E+01 427 111 255 4 .114E+01 483 126 127 1 .146E+01 372 97 241 4 .144E+01 428 111 301 1 .850E-01 484 126 270 4 .114E+01 373 97 301 1 .900E-01 430 112 113 1 .146E+01 486 126 301 1 .860E-01 375 98 99 1 .115E+01 431 112 256 4 .114E+01 487 127 128 1 .146E+01 376 98 201 1 .690E-01 433 112 301						· ·
370 96 301 1 .800E-01 426 111 112 1 .146E+01 482 125 301 1 .860E-01 371 97 98 1 .115E+01 427 111 255 4 .114E+01 483 126 127 1 .146E+01 372 97 241 4 .144E+01 428 111 301 1 .850E-01 484 126 270 4 .114E+01 374 97 301 1 .930E-01 430 112 113 1 .146E+01 485 126 301 1 .860E-01 375 98 99 1 .115E+01 431 112 256 4 .114E+01 487 127 128 1 .146E+01 376 98 242 4 .144E+01 432 112 301 1 .850E-01 488 127 271 4 .114E+01						
371 97 98 1 .115E+01 427 111 255 4 .114E+01 483 126 127 1 .146E+01 372 97 241 4 .144E+01 428 111 301 1 .850E-01 484 126 270 4 .114E+01 373 97 301 1 .900E-01 429 111 301 1 .830E-01 485 126 301 1 .680E-01 374 97 301 1 .930E-01 430 112 113 1 .146E+01 486 126 301 1 .860E-01 375 98 99 1 .115E+01 431 112 256 4 .114E+01 487 127 128 1 .146E+01 376 98 242 4 .144E+01 432 112 301 1 .850E-01 488 127 271 4 .114E+01 377 98 301 1 .690E-01 433 112 301 1 .830E-01 488 127 271 4 .114E+01 379 99 301 1 .123E+00 434 113 114 1 .146E+01 490 127 301 1 .820E-01 379 99 100 1 .115E+01 435 113 257 4 .114E+01 491 128 129 1 .146E+01 380 99 243 4 .144E+01 436 113 301 1 .850E-01 491 128 129 1 .146E+01 381 99 301 1 .260E-01 437 113 301 1 .850E-01 492 128 272 4 .114E+01 381 99 301 1 .149E+00 438 114 115 1 .146E+01 494 128 301 1 .910E-01 383 100 101 1 .115E+01 439 114 258 4 .114E+01 495 129 130 1 .146E+01 384 100 244 4 .144E+01 440 114 301 1 .850E-01 496 129 273 4 .114E+01 385 100 301 1 .380E-01 441 114 301 1 .850E-01 496 129 273 4 .114E+01 385 100 301 1 .380E-01 441 114 301 1 .850E-01 497 129 301 1 .970E-01 386 101 102 1 .115E+01 442 115 116 1 .146E+01 499 130 131 1 .970E-01 386 101 102 1 .115E+01 442 115 301 1 .830E-01 497 129 301 1 .830E-01 388 101 301 1 .920E-01 444 115 301 1 .840E-01 500 130 274 4 .114E+01 388 101 301 1 .920E-01 444 115 301 1 .840E-01 500 130 274 4 .114E+01 389 101 301 1 .720E-01 445 115 301 1 .840E-01 500 130 274 4 .114E+01 389 101 301 1 .720E-01 445 115 301 1 .840E-01 500 130 274 4 .114E+01 389 101 301 1 .720E-01 445 115 301 1 .840E-01 500 130 301 1 .100E+00 390 102 103 1 .129E+01 446 116 117 1 .146E+01 502 130 301 1 .100E+00 390 102 103 1 .129E+01 446 116 117 1 .146E+01 503 131 132 1 .146E+01 391 102 246 4 .144E+01 447 116 260 4 .114E+01 503 131 132 1 .146E+01				1		
372 97 241 4 .144E+01 428 111 301 1 .850E-01 484 126 270 4 .114E+01 373 97 301 1 .900E-01 429 111 301 1 .830E-01 485 126 301 1 .680E-01 374 97 301 1 .930E-01 430 112 113 1 .146E+01 486 126 301 1 .860E-01 375 98 99 1 .115E+01 431 112 256 4 .114E+01 487 127 128 1 .146E+01 376 98 242 4 .144E+01 432 112 301 1 .850E-01 488 127 271 4 .114E+01 377 98 301 1 .690E-01 433 112 301 1 .830E-01 488 127 271 4 .114E+01 379 99 301 1 .123E+00 434 113 114 1 .146E+01 490 127 301 1 .820E-01 379 99 100 1 .115E+01 435 113 257 4 .114E+01 491 128 129 1 .146E+01 380 99 243 4 .144E+01 436 113 301 1 .850E-01 492 128 272 4 .114E+01 381 99 301 1 .260E-01 437 113 301 1 .850E-01 492 128 272 4 .114E+01 382 99 301 1 .149E+00 438 114 115 1 .146E+01 494 128 301 1 .910E-01 383 100 101 1 .115E+01 439 114 258 4 .114E+01 495 129 130 1 .146E+01 384 100 244 4 .144E+01 440 114 301 1 .850E-01 496 129 273 4 .114E+01 385 100 301 1 .380E-01 441 114 301 1 .850E-01 496 129 273 4 .114E+01 385 100 301 1 .380E-01 441 114 301 1 .850E-01 497 129 301 1 .970E-01 386 101 102 1 .115E+01 442 115 116 1 .146E+01 498 129 301 1 .970E-01 387 101 245 4 .144E+01 443 115 259 4 .114E+01 499 130 131 1 .146E+01 388 101 301 1 .920E-01 444 115 301 1 .840E-01 500 130 274 4 .114E+01 389 101 301 1 .920E-01 445 115 301 1 .840E-01 500 130 274 4 .114E+01 389 101 301 1 .720E-01 445 115 301 1 .840E-01 500 130 274 4 .114E+01 389 101 301 1 .720E-01 446 116 117 1 .146E+01 502 130 301 1 .830E-01 391 102 246 4 .144E+01 447 116 260 4 .114E+01 503 131 132 1 .146E+01						
373 97 301 1 .900E-01 429 111 301 1 .830E-01 485 126 301 1 .680E-01 374 97 301 1 .930E-01 430 112 113 1 .146E+01 486 126 301 1 .860E-01 375 98 99 1 .115E+01 431 112 256 4 .114E+01 487 127 128 1 .146E+01 376 98 242 4 .144E+01 432 112 301 1 .850E-01 488 127 271 4 .114E+01 377 98 301 1 .690E-01 433 112 301 1 .850E-01 489 127 301 1 .820E-01 379 99 100 1 .115E+01 435 113 257 4 .114E+01 491 128 129 1 .146E+01 381 99 301 1 .260E-01 437 113 301						
374 97 301 1 .930E-01 430 112 113 1 .146E+01 486 126 301 1 .860E-01 375 98 99 1 .115E+01 431 112 256 4 .114E+01 487 127 128 1 .146E+01 376 98 242 4 .144E+01 432 112 301 1 .850E-01 488 127 271 4 .114E+01 377 98 301 1 .690E-01 433 112 301 1 .830E-01 489 127 301 1 .820E-01 378 98 301 1 .123E+00 434 113 114 1 .146E+01 490 127 301 1 .850E-01 379 99 100 1 .115E+01 435 113 257 4 .114E+01 491 128 129 1 .146E+01 380 99 243 4 .144E+01 436 113 301 1 .850E-01 492 128 272 4 .114E+01 381 99 301 1 .260E-01 437 113 301 1 .830E-01 492 128 272 4 .114E+01 382 99 301 1 .149E+00 438 114 115 1 .146E+01 494 128 301 1 .910E-01 383 100 101 1 .115E+01 439 114 258 4 .114E+01 495 129 130 1 .146E+01 381 100 244 4 .144E+01 440 114 301 1 .850E-01 496 129 273 4 .114E+01 385 100 301 1 .380E-01 441 114 301 1 .850E-01 496 129 273 4 .114E+01 385 100 301 1 .380E-01 441 114 301 1 .850E-01 497 129 301 1 .970E-01 386 101 102 1 .115E+01 442 115 116 1 .146E+01 498 129 301 1 .970E-01 387 101 245 4 .144E+01 442 115 301 1 .830E-01 497 129 301 1 .970E-01 388 101 301 1 .920E-01 444 115 301 1 .840E-01 500 130 274 4 .114E+01 389 101 301 1 .720E-01 445 115 301 1 .840E-01 500 130 274 4 .114E+01 389 101 301 1 .720E-01 445 115 301 1 .840E-01 500 130 274 4 .114E+01 389 102 246 4 .144E+01 446 116 117 1 .146E+01 502 130 301 1 .830E-01 391 102 246 4 .144E+01 447 116 260 4 .114E+01 503 131 132 1 .146E+01						
375 98 99 1 .115E+01 431 112 256 4 .114E+01 487 127 128 1 .146E+01 376 98 242 4 .144E+01 432 112 301 1 .850E-01 488 127 271 4 .114E+01 377 98 301 1 .690E-01 433 112 301 1 .830E-01 489 127 301 1 .820E-01 378 98 301 1 .123E+00 434 113 114 1 .146E+01 490 127 301 1 .850E-01 379 99 100 1 .115E+01 435 113 257 4 .114E+01 491 128 129 1 .146E+01 380 99 243 4 .144E+01 436 113 301 1 .850E-01 492 128 272 4 .114E+01 381 99 301 1 .149E+00 438 114 115						
376 98 242 4 .144E+01 432 112 301 1 .850E-01 488 127 271 4 .114E+01 377 98 301 1 .690E-01 433 112 301 1 .830E-01 489 127 301 1 .820E-01 378 98 301 1 .123E+00 434 113 114 1 .146E+01 490 127 301 1 .850E-01 379 99 100 1 .115E+01 435 113 257 4 .114E+01 491 128 129 1 .146E+01 380 99 243 4 .144E+01 436 113 301 1 .850E-01 492 128 272 4 .114E+01 381 99 301 1 .260E-01 437 113 301 1 .830E-01 493 128 301 1 .910E-01 382 99 301 1 .149E+00 438 114 115 1 .146E+01 494 128 301 1 .840E-01 383 100 101 1 .115E+01 439 114 258 4 .114E+01 495 129 130 1 .146E+01 381 100 244 4 .144E+01 440 114 301 1 .850E-01 496 129 273 4 .114E+01 385 100 301 1 .380E-01 441 114 301 1 .850E-01 496 129 273 4 .114E+01 385 100 301 1 .380E-01 441 114 301 1 .830E-01 497 129 301 1 .970E-01 386 101 102 1 .115E+01 442 115 116 1 .146E+01 498 129 301 1 .830E-01 387 101 245 4 .144E+01 443 115 259 4 .114E+01 499 130 131 1 .146E+01 388 101 301 1 .920E-01 444 115 301 1 .840E-01 500 130 274 4 .114E+01 389 101 301 1 .720E-01 445 115 301 1 .840E-01 500 130 274 4 .114E+01 389 101 301 1 .720E-01 445 115 301 1 .830E-01 501 130 301 1 .100E+00 390 102 103 1 .129E+01 446 116 117 1 .146E+01 502 130 301 1 .830E-01 391 102 246 4 .144E+01 447 116 260 4 .114E+01 503 131 132 1 .146E+01						
377 98 301 1 .690E-01 433 112 301 1 .830E-01 489 127 301 1 .820E-01 378 98 301 1 .123E+00 434 113 114 1 .146E+01 490 127 301 1 .850E-01 379 99 100 1 .115E+01 435 113 257 4 .114E+01 491 128 129 1 .146E+01 380 99 243 4 .144E+01 436 113 301 1 .850E-01 492 128 272 4 .114E+01 381 99 301 1 .260E-01 437 113 301 1 .830E-01 493 128 301 1 .910E-01 382 99 301 1 .149E+00 438 114 115 1 .146E+01 494 128 301 1 .840E-01 383 100 101 1 .15E+01 440 114 301						
378 98 301 1 .123E+00 434 113 114 1 .146E+01 490 127 301 1 .850E-01 379 99 100 1 .115E+01 435 113 257 4 .114E+01 491 128 129 1 .146E+01 380 99 243 4 .144E+01 436 113 301 1 .850E-01 492 128 272 4 .114E+01 381 99 301 1 .260E-01 437 113 301 1 .830E-01 493 128 301 1 .910E-01 382 99 301 1 .149E+00 438 114 115 1 .146E+01 494 128 301 1 .840E-01 383 100 101 1 .115E+01 439 114 258 4 .114E+01 495 129 130 1 .146E+01 384 100 244 4 .144E+01 440 114 301 1 .850E-01 496 129 273 4 .114E+01 385 100 301 1 .380E-01 441 114 301 1 .850E-01 496 129 273 4 .114E+01 386 101 102 1 .115E+01 442 115 116 1 .146E+01 498 129 301 1 .970E-01 387 101 245 4 .144E+01 443 115 259 4 .114E+01 498 129 301 1 .830E-01 388 101 301 1 .920E-01 444 115 301 1 .840E-01 500 130 274 4 .114E+01 388 101 301 1 .920E-01 444 115 301 1 .840E-01 500 130 274 4 .114E+01 389 101 301 1 .720E-01 445 115 301 1 .840E-01 500 130 301 1 .100E+00 390 102 103 1 .129E+01 446 116 117 1 .146E+01 502 130 301 1 .830E-01 391 102 246 4 .144E+01 447 116 260 4 .114E+01 503 131 132 1 .146E+01						1
379 99 100 1 .115E+01 435 113 257 4 .114E+01 491 128 129 1 .146E+01 380 99 243 4 .144E+01 436 113 301 1 .850E-01 492 128 272 4 .114E+01 381 99 301 1 .260E-01 437 113 301 1 .830E-01 493 128 301 1 .910E-01 382 99 301 1 .149E+00 438 114 115 1 .146E+01 494 128 301 1 .840E-01 383 100 101 1 .115E+01 439 114 258 4 .114E+01 495 129 130 1 .146E+01 384 100 204 4 .144E+01 440 114 301 1 .850E-01 496 129 273 4 .114E+01 385 100 301 1 .15E+01 442 115 16 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
380 99 243 4 .144E+01 436 113 301 1 .850E-01 492 128 272 4 .114E+01 381 99 301 1 .260E-01 437 113 301 1 .830E-01 493 128 301 1 .910E-01 382 99 301 1 .149E+00 438 114 115 1 .146E+01 494 128 301 1 .840E-01 383 100 101 1 .115E+01 439 114 258 4 .114E+01 495 129 130 1 .146E+01 384 100 244 4 .144E+01 440 114 301 1 .850E-01 496 129 273 4 .114E+01 385 100 301 1 .15E+01 442 115 116 1 .146E+01 497 129 301 1 .830E-01 387 101 245 4 .144E+01 443 115 259 </td <td>• . •</td> <td></td> <td></td> <td></td> <td></td> <td></td>	• . •					
381 99 301 1 .260E-01 437 113 301 1 .830E-01 493 128 301 1 .910E-01 382 99 301 1 .149E+00 438 114 115 1 .146E+01 494 128 301 1 .840E-01 383 100 101 1 .115E+01 439 114 258 4 .114E+01 495 129 130 1 .146E+01 384 100 244 4 .144E+01 440 114 301 1 .850E-01 496 129 273 4 .114E+01 385 100 301 1 .380E-01 441 114 301 1 .830E-01 497 129 301 1 .970E-01 386 101 102 1 .115E+01 442 115 116 1 .146E+01 498 129 301 1 .830E-01 387 101 245 4 .144E+01 443 115 259 4 .114E+01 499 130 131 1 .146E+01 388 101 301 1 .920E-01 444 115 301 1 .840E-01 500 130 274 4 .114E+01 389 101 301 1 .720E-01 445 115 301 1 .840E-01 500 130 274 4 .114E+01 390 102 103 1 .129E+01 446 116 117 1 .146E+01 502 130 301 1 .830E-01 391 102 246 4 .144E+01 447 116 260 4 .114E+01 503 131 132 1 .146E+01						
382 99 301 1 .149E+00 438 114 115 1 .146E+01 494 128 301 1 .840E-01 383 100 101 1 .115E+01 439 114 258 4 .114E+01 495 129 130 1 .146E+01 384 100 244 4 .144E+01 440 114 301 1 .850E-01 496 129 273 4 .114E+01 385 100 301 1 .380E-01 441 114 301 1 .830E-01 497 129 301 1 .970E-01 386 101 102 1 .115E+01 442 115 116 1 .146E+01 498 129 301 1 .830E-01 387 101 245 4 .144E+01 443 115 259 4 .114E+01 499 130 131 1 .146E+01 388 101 301 1 .920E-01 445 115 30						4
383 100 101 1 .115E+01 439 114 258 4 .114E+01 495 129 130 1 .146E+01 384 100 244 4 .144E+01 440 114 301 1 .850E-01 496 129 273 4 .114E+01 385 100 301 1 .380E-01 441 114 301 1 .830E-01 497 129 301 1 .970E-01 386 101 102 1 .115E+01 442 115 116 1 .146E+01 498 129 301 1 .830E-01 387 101 245 4 .144E+01 443 115 259 4 .114E+01 499 130 131 1 .146E+01 388 101 301 1 .920E-01 444 115 301 1 .840E-01 500 130 274 4 .114E+01 389 101 301 1 .720E-01 445 115 301 1 .830E-01 501 130 301 1 .100E+00 390 102 103 1 .129E+01 446 116 117 1 .146E+01 502 130 301 1 .830E-01 391 102 246 4 .144E+01 447 116 260 4 .114E+01 503 131 132 1 .146E+01						
384 100 244				_		
385 100 301 1 .380E-01 441 114 301 1 .830E-01 497 129 301 1 .970E-01 386 101 102 1 .115E+01 442 115 116 1 .146E+01 498 129 301 1 .830E-01 387 101 245 4 .144E+01 443 115 259 4 .114E+01 499 130 131 1 .146E+01 388 101 301 1 .920E-01 444 115 301 1 .840E-01 500 130 274 4 .114E+01 389 101 301 1 .720E-01 445 115 301 1 .830E-01 501 130 301 1 .100E+00 390 102 103 1 .129E+01 446 116 117 1 .146E+01 502 130 301 1 .830E-01 391 102 246 4 .144E+01 447 116 2						
386 101 102 1 .115E+01 442 115 116 1 .146E+01 498 129 301 1 .830E-01 387 101 245 4 .144E+01 443 115 259 4 .114E+01 499 130 131 1 .146E+01 388 101 301 1 .920E-01 444 115 301 1 .840E-01 500 130 274 4 .114E+01 389 101 301 1 .720E-01 445 115 301 1 .830E-01 501 130 301 1 .100E+00 390 102 103 1 .129E+01 446 116 117 1 .146E+01 502 130 301 1 .830E-01 391 102 246 4 .144E+01 447 116 260 4 .114E+01 503 131 132 1 .146E+01						1 0705-01
387 101 245 4 .144E+01 443 115 259 4 .114E+01 499 130 131 1 .146E+01 388 101 301 1 .920E-01 444 115 301 1 .840E-01 500 130 274 4 .114E+01 389 101 301 1 .720E-01 445 115 301 1 .830E-01 501 130 301 1 .100E+00 390 102 103 1 .129E+01 446 116 117 1 .146E+01 502 130 301 1 .830E-01 391 102 246 4 .144E+01 447 116 260 4 .114E+01 503 131 132 1 .146E+01						
388 101 301						
389 101 301 1 .720E-01 445 115 301 1 .830E-01 501 130 301 1 .100E+00 390 102 103 1 .129E+01 446 116 117 1 .146E+01 502 130 301 1 .830E-01 391 102 246 4 .144E+01 447 116 260 4 .114E+01 503 131 132 1 .146E+01						
390 102 103 1 .129E+01 446 116 117 1 .146E+01 502 130 301 1 .830E-01 391 102 246 4 .144E+01 447 116 260 4 .114E+01 503 131 132 1 .146E+01						
391 102 246 4 .144E+01 447 116 260 4 .114E+01 503 131 132 1 .146E+01			445 115 301	1 .830E-01		
331 102 240 4 11112101						
392 102 301 1 .124E+00 448 116 301 1 .840E-01 504 131 2/5 4 .114E+01						_
	392 102 301	1 .124E+00	448 116 301	1 .84UE-UI	504 131 2/5	4 .1145401

D					
Brnh From To					
505 131 301	1 .101E+00	561 158 157	5 .316E+03	617 214 213	5 .316E+03
506 131 301	1 .830E-01	562 159 158	5 .316E+03	618 215 214	5 .316E+03
507 132 133	1 .146E+01	563 160 159	5 .316E+03	619 216 215	5 .316E+03
508 132 276	4 .114E+01	564 161 160	5 .316E+03	620 217 216	5 .316E+03
509 132 301	1 .100E+00	565 162 161	5 .316E+03	621 218 217	5 .316E+03
510 132 301	1 .830E-01	566 163 162	5 .316E+03	622 219 218	5 .316E+03
511 133 134	1 .146E+01	567 164 163	5 .316E+03	623 220 219	5 .316E+03
512 133 277	4 .114E+01	568 165 164	5 .316E+03	624 221 220	5 .316E+03
513 133 301	1 .970E-01	569 166 165	5 .316E+03	625 222 221	5 .316E+03
514 133 301	1 .830E-01	570 167 166	5 .316E+03	626 223 222	5 .316E+03
515 134 135	1 .146E+01	571 168 167	5 .316E+03	627 224 223	5 .316E+03
516 134 278	4 .114E+01	572 169 168	5 .316E+03	628 225 224	5 .316E+03
517 134 301	1 .910E-01	573 170 169	5 .316E+03	629 226 225	5 .316E+03
518 134 301	1 .840E-01	574 171 170	5 .316E+03	630 227 226	5 .316E+03
519 135 136	1 .146E+01	575 172 171	5 .316E+03	631 228 227	5 .316E+03
520 135 279	4 .114E+01	576 173 172	5 .316E+03	632 229 228	5 .316E+03
521 135 301	1 .820E-01	577 174 173	5 .316E+03	633 230 229	5 .316E+03
522 135 301	1 .840E-01	578 175 174	5 .316E+03	634 231 230	5 .316E+03
523 136 137	1 .146E+01	579 176 175	5 .316E+03	635 232 231	5 .316E+03
524 136 280	4 .114E+01	580 177 176	5 .316E+03	636 233 232	5 .316E+03
525 136 301	1 .680E-01	581 178 177	5 .316E+03	637 234 233	5 .316E+03
526 136 301	1 .860E-01	582 179 178	5 .316E+03	638 235 234	5 .316E+03
527 137 138	1 .146E+01	583 180 179	5 .316E+03	639 236 235	5 .316E+03
528 137 281	4 .114E+01	584 181 180	5 .316E+03	640 237 236	5 .316E+03
529 137 301	1 .490E-01	585 182 181	5 .316E+03	641 238 237	5 .316E+03
530 137 301	1 .870E-01	586 183 182	5 .316E+03	642 239 238	5 .316E+03
531 138 139	1 .146E+01	587 184 183	5 .316E+03	643 240 239	5 .316E+03
532 138 282	4 .114E+01	588 185 184	5 .316E+03	644 241 240	5 .316E+03
533 138 301	1 .240E-01	589 186 185	5 .316E+03	645 242 241	5 .316E+03
534 138 301	1 .880E-01	590 187 186	5 .316E+03	646 243 242	5 .316E+03
535 139 140	1 .146E+01	591 188 187	5 .316E+03	647 244 243	5 .316E+03
536 139 283	4 .114E+01	592 189 188	5 .316E+03	648 245 244	5 .316E+03
537 139 301	1 .900E-01	593 190 189	5 .316E+03	649 246 245	5 .316E+03
538 140 141	1 .160E+01	594 191 190	5 .316E+03	650 247 246	5 .316E+03
539 140 284	4 .114E+01	595 192 191	5 .316E+03	651 248 247	5 .316E+03
540 140 301	1 .910E-01	596 193 192	5 .316E+03	652 249 248	5 .316E+03
541 141 142	1 .178E+01	597 194 193	5 .316E+03	653 250 249	5 .316E+03
542 141 285	4 .933E+00	598 195 194	5 .316E+03	654 251 250	5 .316E+03
543 142 143	1 .178E+01	599 196 195	5 .316E+03	655 252 251	5 .316E+03
544 142 286	4 .933E+00	600 197 196	5 .316E+03	656 253 252	5 .316E+03
545 143 144	1 .178E+01	601 198 197	5 .316E+03	657 254 253	5 .316E+03
546 143 287	4 .933E+00	602 199 198	5 .316E+03	658 255 254	5 .316E+03
547 144 288	4 .933E+00	603 200 199	5 .316E+03	659 256 255	5 .316E+03
548 145 302	5 .316E+03	604 201 200	5 .316E+03	660 257 256	5 .316E+03
549 146 145	5 .316E+03	605 202 201	5 .316E+03	661 258 257	5 .316E+03
550 147 146	5 .316E+03	606 203 202	5 .316E+03	662 259 258	5 .316E+03
551 148 147	5 .316E+03	607 204 203		663 260 259	5 .316E+03
552 149 148	5 .316E+03	608 205 204	5 .316E+03	664 261 260	5 .316E+03
553 150 149	5 .316E+03	609 206 205	5 .316E+03	665 262 261	5 .316E+03
554 151 150	5 .316E+03	610 207 206	5 .316E+03	666 263 262	5 .316E+03
555 152 151	5 .316E+03	611 208 207	5 .316E+03	667 264 263	5 .316E+03
556 153 152	5 .316E+03	612 209 208	5 .316E+03	668 265 264	5 .316E+03
557 154 153	5 .316E+03	613 210 209	5 .316E+03	669 266 265	5 .316E+03
558 155 154	5 .316E+03	614 211 210	5 .316E+03	670 267 266	5 .316E+03
559 156 155	5 .316E+03	615 212 211	5 .316E+03	671 268 267	5 .316E+03
560 157 156	5 .316E+03		5 .316E+03	672 269 268	5 .316E+03
	/-				

```
Brnh From To Tag Conduct
                5 .316E+03
673 270 269
                5 .316E+03
674 271 270
675 272 271
676 273 272
                5 .316E+03
5 .316E+03
677 274 273
                5 .316E+03
                5 .316E+03
678 275 274
                5 .316E+03
5 .316E+03
679 276 275
680 277 276
681 278 277
                5 .316E+03
682 279 278
                5 .316E+03
                5 .316E+03
5 .316E+03
683 280 279
684 281 280
685 282 281
                5 .316E+03
686 283 282
                5 .316E+03
                5 .316E+03
5 .316E+03
687 284 283
688 285 284
689 286 285
                5 .316E+03
                5 .316E+03
690 287 286
691 288 287
                5 .316E+03
```

TASS GENERAL INPUT MENU - SI Units

(1) Case Title: TALSR(METRIC) -- RUN 5. COMPLEX MODEL, MASS FLOW OF 362.9 kg/hr (800 lbm/hr)

(2)	Nodes	288	
(3)	Constant Temperatures	2	
(4)	Unique Exponents	0	
(5)	Temperature Dependent Conductances	0	
(6)	Temperature Dependent Heat Inputs	0	
(7)	Computational Accuracy	.0100	
(8)	Starting Temperature	25.0	
Are	these inputs correct (Y/N) ? Y		

INPUT DATA						4	become after all conduct	Dies Aces
Fin Length (L)	Fla Thickness	Fin specking (2)	Fin specking (z.) Thermal Conductivity of Copper (bytesynolds Printaber Printaber) Conductive Conductivity (conductivity)	Reynolds Number	Principal Control			
G	***	0 0003	107	1000.00	0 303	0 635	0 463	0.134
		- A de	Ham Transfer Conficers (b)	4	Yhaf	Dist. butween fludes	Flustinote	K - Value
K-Value	(cas)	(00)		1	TANA	(500)		(M/M)
			****			0 303	MA	1.7784
Z			539			0 303	NA	1.1707
2						0 334	N/A	1.0043
2						196.0	VAV.	1.4612
ž			200			0.367	MA	1.4248
2 :		91010	0.03626	0.66200	0.01333	0.367	900 9	10000
2 9		01010	0.03626	0.66800	0.01314	0.367	0000	0000
2 5		9101.0	0.03626	0.65200	0.01291	0.367	6.880	0.0824
2 :		0.0666	0.04746		0.00282	0.367	9 600	0 0241
2 5		91010	0.03628	0.63500	0.01264	0.367	90099	10000
2 3	0.360	0.000	0.03907		85900 B	190.0	6.600	0.0482
2 5		01010	0.03626	0.62100	0.01245	0 367	0.000	0.0003
25		0.0045	0.03613		20,000	0.367	6.600	0.0093
2 3		01010	0 03626	0.60600	0.01226	196.0	9.800	0.0070
	0.631	0.000	0 03740		001136	0.367	0.000	0 0010
2 3	7	0.1010	0.03626	0.60000	0.01210	6.367	6 600	0.000
200	0.820	0 0062	0.03716		0 01211	190.0	900 9	0.0011
¥19	1.143	0.1010	0.03426	0.69000	971100	6.367	0000	0.0000
K19	1990	0.0000	0.03606		0.01354	28.0	700 0	2000
077	1.143	0.101.0	97960 0	0.68400	001100	0.30	709 0	10000
2	0.716	0.0003	0.0000		0.01100	(nc.)	9	300
2	1.143	0.1018	0.03628	0 58100	001100	797.0	700 0	7500
23	0.732	0.0664	0.03600		0.01410	/95.0	0000	6.1013
Ž	1.143	0.1010	0.03626	0.66100	10000	796.0	200.0	9
\$23	1.143	0.1010	0.03628	2000	1000		900	0.0456
974	1.143	0.1010	97970	00000		296.0	9 200	0 0460
7	1.143	0.1019	97950	0.00000		29. 0	9000	0 00007
8 7	1.143	0.1016	97970	0.0000	2700	11		1007.1
97		9	VN	OBSON O	0.01216		6.000	0.0673
3	2		2705.70			9910	N.V	1.1524
Ž.			5		•	9 40	VA	10001
2	• • • •	4100	069600	0,69000	001100	0.465	2.540	****
2	101.0	2000	0295.00	0 44800	0.00988	994.0	2.540	0.000
2	9000	0.000	WORKS O	0.20300	0.00450	6.465	200	0.0410
200	200	0.0.0	W.9E00	1 10100	0.01745	0.465	7.640	0 1365
2	2002	0.000	#2050 O	0.00000	0.00231	0.406	7.640	0.0210
2	970	0.00	0.03600	0.62200	00100	0 400	240	0.1171
K36	24.0	001.0	0.000	0.3000	0.00700	994.9	2.040	0 0042
200	0.000	30.0	0.000	0.85100	0.01200	591-0	7 040	0 1012
K40	-104	0.1021	930000	0.0100	970100	9770	3 640	0.000
K+1	100	6.1010	0.03028	0.0				

0.05300 0.01139 0.387 0.000 0.0028 0.	0.03628
0.55500 0.01113 0.557 0.	0.03626
0.55200 0.01153 0.257 0.000 0.55200 0.01153 0.257 0.000 0.55200 0.01153 0.257 0.000 0.55200 0.01153 0.257 0.000 0.55200 0.01153 0.257 0.000 0.55200 0.01154 0.257 0.000 0.55200 0.01154 0.257 0.000 0.55200 0.01154 0.257 0.000 0.55200 0.01155 0.257 0.000 0.55200 0.01156 0.257 0.000 0.55200 0.01156 0.257 0.000 0.55200 0.01156 0.257 0.000 0.55200 0.01156 0.257 0.000 0.55200 0.01156 0.257 0.000 0.55200 0.01156 0.257 0.000 0.55200 0.01156 0.257 0.000 0.55200 0.01156 0.257 0.000 0.55200 0.01150 0.257 0.000 0.55200 0.01150 0.257 0.000 0.55200 0.01150 0.257 0.000 0.55200 0.01150 0.257 0.000 0.55200 0.01150 0.257 0.000 0.55200 0.01150 0.257 0.000 0.55200 0.01150 0.257 0.000 0.55200 0.01150 0.257 0.000 0.05200 0.01150 0.0000 0.05200 0.01150 0.0000 0.05200 0.01150 0.0000 0.05200 0.01150 0.0000 0.05200 0.01150 0.0000 0.05200 0.01150 0.0000 0.05200 0.01150 0.0000 0.05200 0.01150 0.0000 0.05200 0.01150 0.0000 0.05200 0.01150 0.0000 0.05200 0.01150 0.00000	0 03626
0.01103 0.387 6.000 0.01103 0.387 6.000 0.01103 0.387 6.000 0.01104 0.387 6.000 0.01104 0.387 6.000 0.01105 0.387 6.000 0.01106 0.387 6.000 0.01106 0.387 6.000 0.01106 0.387 6.000 0.01107 0.387 6.000 0.01108 0.387 6.000 0.01108 0.387 6.000 0.01109 0.387 6.000 0.01107 0.387 6.000 0.0110	0.03626
001103 0 367 6 680 600 600 600 600 600 600 600 600 6	0.03626
0.01163 0.367 0.889 0.01182 0.367 0.889 0.01183 0.367 0.889 0.01184 0.367 0.889 0.01185 0.367 0.889 0.01186 0.367 0.889 0.01189 0.367 0.889 0.0189 0.367 0.889	0.03626
0.055000 0.011142 0.397 0.0000 0.05500 0.05500 0.011142 0.397 0.0000 0.011142 0.397 0.0000 0.05500 0.011142 0.397 0.0000 0.05500 0.011142 0.397 0.0000 0.0000 0.011142 0.397 0.0000 0.0000 0.011142 0.397 0.0000 0.0000 0.011142 0.397 0.0000 0.0000 0.011142 0.397 0.0000 0.0000 0.011142 0.397 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00000 0.00	0.03626
0.00000 0.011140 0.347 0.0000 0.0000 0.0000 0.011140 0.347 0.0000 0.011140 0.347 0.0000 0.011140 0.347 0.0000 0.011140 0.347 0.0000 0.011140 0.347 0.0000 0.011140 0.347 0.0000 0.011140 0.347 0.0000 0.011140 0.347 0.0000 0.011140 0.347 0.0000 0.011140 0.011140 0.347 0.0000 0.011140 0.011140 0.347 0.0000 0.011140 0.011140 0.347 0.0000 0.011140 0.011140 0.347 0.0000 0.011140 0.011140 0.347 0.0000 0.011140 0.011140 0.347 0.0000 0.011140 0.011140 0.347 0.0000 0.011140 0.011140 0.347 0.0000 0.011140 0.011140 0.347 0.0000 0.011140 0.011140 0.347 0.0000 0.011140 0.011140 0.347 0.0000 0.011140 0.011140 0.347 0.0000 0.011140 0.011140 0.347 0.0000 0.011140 0.011140 0.347 0.0000 0.011140 0.011140 0.347 0.0000 0.011140 0.011140 0.347 0.0000 0.011140 0.011140 0.347 0.0400 0.011140 0.011140 0.347 0.0400 0.011140 0.011140 0.347 0.0400 0.011140 0.011140 0.347 0.0400 0.011140 0.011140 0.347 0.0400 0.011140 0.011140 0.347 0.0400 0.011140 0.011140 0.347 0.0400 0.011140 0.011140 0.347 0.0400 0.011140 0.347 0.0400 0.011140 0.347 0.0400 0.011140 0.347 0.0400 0.011140 0.347 0.0400 0.011140 0.341 0.0400 0.011140 0.341 0.0400 0.011140 0.341 0.0400 0.011140 0.341 0.0400 0.011140 0.341 0.0400 0.011140 0.341 0.0400 0.011140 0.341 0.0400 0.011140 0.341 0.0400 0.011140 0.341 0.0400 0.011140 0.341 0.0400 0.011140 0.341 0.0400 0.011140 0.341 0.0400 0.011140 0.341 0.0400 0.011140 0.341 0.0400 0.011140 0.341 0.0400 0.0400 0.011140 0.341 0.0400 0.0400 0.041140 0.341 0.0400 0.0400 0.041140 0.341 0.0400 0.0400 0.041140 0.341 0.0400 0.0400 0.041140 0.341 0.0400 0.041140 0.341 0.0400 0.0400 0.041140 0.341 0.0400 0.0400 0.041140 0.0400 0.041140 0.0400 0.041140 0.0400 0.041140 0.0400 0.041140 0.0400 0.041140 0.0400 0.041140 0.0400 0.041140 0.0400 0.041140 0.0400 0.04114	0 03628
0 65500 0 0 0 11 12 0 234 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.03626
0.65500 0.01102 0.347 0.699 0.65300 0.01124 0.347 0.699 0.65500 0.01124 0.347 0.699 0.65600 0.01124 0.347 0.699 0.66600 0.01124 0.347 0.499 0.66600 0.01124 0.499 0.66600 0.01124 0.499 0.66600 0.01124 0.499 0.66600 0.01124 0.499 0.66600 0.0	0.03626
0.65500 0.01130 0.367 0.699 0.65500 0.01102 0.367 0.699 0.699 0.65500 0.01102 0.367 0.699 0.699 0.65500 0.01102 0.367 0.699 0.699 0.65500 0.01102 0.367 0.699 0.699 0.691 0.69	979500
0.55500 0.011640 0.347 0.5500 0.55400 0.55500 0.01102 0.347 0.55000 0.01103 0.347 0.55000 0.55000 0.01103 0.347 0.55000 0.55000 0.01104 0.347 0.55000 0.01104 0.347 0.55000 0.01104 0.347 0.55000 0.01104 0.347 0.5500 0.01104 0.347 0.5500 0.01104 0.347 0.5500 0.01104 0.347 0.5500 0.01104 0.347 0.5500 0.01104 0.347 0.347 0.5500 0.01104 0.347 0.347 0.5500 0.01104 0.347 0.347 0.5500 0.01104 0.347 0.347 0.5500 0.01104 0.347 0.347 0.5500 0.01104 0.347 0.347 0.347 0.5500 0.01104 0.347 0.347 0.347 0.5500 0.01104 0.0104 0.347 0.347 0.347 0.5500 0.01104 0.01204 0.347 0.347 0.340 0.01204	0.03628
0.55400 0.01103 0.337 0.560 0.55400 0.01103 0.347 0.660 0.55200 0.01103 0.347 0.660 0.55200 0.01103 0.347 0.660 0.55200 0.01104 0.347 0.540 0.55200 0.01104 0.347 0.540 0.55200 0.01104 0.367 0.465 7.540 0.55200 0.01104 0.367 0.465 0.465 0.55200 0.01104 0.367 0.465 0.55200 0.01104 0.367 0.465 0.55200 0.01104 0.367 0.465 0.55200 0.01104 0.367 0.367 0.660 0.55200 0.01104 0.367 0.367 0.660 0.	0.03628
0.050400 0.01185 0.387 0.000 0.050400 0.01184 0.387 0.000 0.051400 0.01172 0.387 0.000 0.051400 0.01182 0.387 0.000 0.051400 0.01187 0.387 0.000 0.051400 0.01187 0.387 0.000 0.051400 0.01187 0.387 0.000 0.051400 0.01187 0.387 0.000 0.05140 0.01187 0.387 0.000 0.05040 0.01187 0.465 7.040 0.05040 0.01187 0.465 7.040 0.05040 0.01187 0.465 7.040 0.05040 0.01187 0.465 7.040 0.05040 0.01187 0.387 0.000 0.05040 0.01188 0.387 0.000 0.05040 0.01189 0.387 0.000 0.05040 0.01899 0.387 0.000	0.03628
0.62200 0.01185 0.347 0.6600 0.62200 0.01185 0.347 0.347 0.6600 0.62200 0.01184 0.347 0.347 0.6600 0.64600 0.01184 0.347 0.347 0.6600 0.64600 0.01184 0.347 0.347 0.6600 0.64600 0.01184 0.347 0.347 0.6600 0.64600 0.01184 0.347 0.347 0.6600 0.64600 0.01184 0.347 0.347 0.6600 0.64600 0.01184 0.347 0.466 0.6400 0.64600 0.01184 0.347 0.466 0.6400 0.64600 0.04600 0.347 0.466 0.466 0.347 0.6460 0.04600 0.04600 0.347 0.466 0.347 0.6460 0.04600 0.04600 0.347 0.466 0.347 0.6460 0.04600 0.04600 0.347 0.466 0.347 0.6460 0.04600 0.04600 0.04600 0.347 0.466 0.347 0.6460 0.347 0.6460 0.04600 0.04600 0.04600 0.347 0.466 0.347 0.6460 0.04600 0.04600 0.347 0.466 0.347 0.6460 0.347 0.6460 0.347 0.6460 0.347 0.6460 0.347 0.6460 0.347 0.6460 0.347 0.6460 0.347 0.6460 0.347 0.6460 0.347 0.6460 0.347 0.3460 0.3460 0.347 0.3460 0.347 0.3460 0.3460 0.347 0.3460 0.347 0.3460 0.347 0.3460 0.347 0.3460 0.347 0.3460 0.3460 0.347 0.3460 0.347 0	0.03626
0 652200 0 01164 0 347 0 660 0 66220 0 01162 0 347 0 660 0 660 0 0 11174 0 347 0 660 0 660 0 0 11174 0 347 0 660 0 660 0 0 11174 0 347 0 660 0 660 0 0 11174 0 347 0 660 0 660 0 0 11174 0 347 0 660 0	0.03626
0 55100 0 01184 0 347 0 600 0 55100 0 01103 0 347 0 600 0 55000 0 01178 0 347 0 600 0 55000 0 01179 0 347 0 600 0 55000 0 01179 0 347 0 600 0 55000 0 01179 0 347 0 600 0 55000 0 01179 0 347 0 600 0 5500 0 01179 0 347 0 600 0 5500 0 01179 0 345 7 540 0 5500 0 01184 0 345 7 540 0 6500 0 01184 0 445 7 540 0 1110 0 0185 7 540 7 540 0 1110 0 0185 7 540 7 540 0 1110 0 0185 7 540 7 540 0 1110 0 0185 7 540 7 540 0 0180 0 0185 0 445 1 540 0 0180 0 0185 0 445 1 540 0 0180 0 0185 0 445 1 540	0.03626
0 56000 0 10163 0 367 6 600 0 49000 0 11182 0 367 6 600 0 49000 0 11179 0 367 6 600 0 41600 0 01179 0 367 6 600 0 41600 0 01179 0 367 6 600 0 41600 0 01179 0 367 6 600 0 41600 0 01179 0 367 6 600 0 41600 0 01179 0 367 6 600 0 41600 0 01179 0 465 7 640 0 41600 0 01180 0 445 7 640 0 41600 0 01180 0 445 7 640 0 41600 0 01181 0 445 7 640 0 4200 0 01182 0 445 7 640 0 4200 0 01826 0 445 7 640 0 4200 0 01826 0 445 7 640 0 4200 0 01826 0 445 7 640 0 4200 0 01826 0 445 7 640 0 4450 0 01826 0 445 7	0.03626
0.550000 0.01102 0.344 0.5000 0.54100 0.01179 0.347 0.347 0.5000 0.54100 0.01179 0.347 0.5400 0.5410	0.03628
0.44100 0.01103 0.364 0.0000 0.4650 0.00103 0.364 0.0000 0.4650 0.364 0.0000 0.4650 0.364 0.364 0.660 0.4650 0.364 0.364 0.465	0.03626
0.01000 0.011005 0.307 0.0000 0.01005 0.307 0.0000 0.307 0.0000 0.307 0.0000 0.307 0.0000 0.307 0.0000 0.307 0.0000 0.307 0.0000 0.307 0.0000 0.0000 0.307 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.00000 0.0	0.03626
0.61600 0.01179 0.347 0.660 0.61600 0.01179 0.347 0.660 0.61600 0.01180 0.465 7.640 0.01601 0.465 7.640 0.01601 0.465 7.640 0.01601 0.465 7.640 0.01601 0.465 7.640 0.01602 0.465 7.640 0.01603 0.465 7.640 0.01604 0.01605 0.465 7.640 0.01604 0.01626 0.465 7.640 0.01604 0.01626 0.465 7.640 0.01604 0.01626 0.465 7.640 0.01604 0.01626 0.465 7.640 0.01604 0.01626 0.465 7.640 0.01604 0.01626 0.465 7.640 0.01604 0.01626 0.465 7.640 0.01606 0.01626 0.367 0.800 0.01606 0.01626 0.367 0.800	97970
0 48100 0 00000 0 367 6 6000 0 0 1800	0.03626
0.055000 0.01150 0.4455 1.040 0.01150 0.01150 0.4455 1.040 0.01150 0.4455 1.040 0.01150 0.4455 1.040 0.01150 0.4455 1.040 0.01150 0.4455 1.040 0.01150 0.4455 1.040 0.01150 0.4455 1.040 0.01150 0.4455 1.040 0.01150 0.01150 0.4455 1.040 0.01150 0.01150 0.4455 1.040 0.01150 0.01150 0.4455 1.040 0.01150 0.01150 0.4455 1.040 0.01150 0.01150 0.4455 1.040 0.01150 0.01150 0.4455 1.040 0.01150 0.01150 0.347 0.040 0.01150 0.347 0.040 0.01150 0.347 0.040 0.01150 0.347 0.040 0.01150 0.347 0.040 0.0455 0.347 0.040 0.01150 0.347 0.040 0.0455 0.040 0.01150 0.347 0.040 0.0455 0.040 0.01150 0.347 0.040 0.0455 0.040 0.01150 0.347 0.040 0.0455 0.040 0.0455 0.040 0.01150 0.347 0.040 0.0455 0.040 0.0455 0.040 0.0455 0.040 0.0455 0.040 0.0455 0.040 0.0455 0.040 0.0455 0.040 0.0455 0.040 0.0455 0.040 0.0455 0.040 0.0455 0.040 0.0455 0.040 0.0455 0.040 0.0455 0.040 0.0455 0.040 0.0455 0.040 0.0455 0.040 0.0455 0.040 0.0455 0.0455 0.040 0.0455 0.0455 0.040 0.0455 0.040 0.0455 0.0455 0.040 0.0455 0.0	0.03626
6 11800 0 01181 0 1183 7 540 0 11804 0 01181 0 1183 7 540 0 11804 0 11805 0 11	0.03020
0 11500 0 00455 0 445 7 540 0 11500 0 00455 0 445 7 540 0 11500 0 00455 0 445 7 540 0 11500 0 00455 0 445 7 540 0 11500 0 00455 0 445 7 540 0 11500 0 00455 0 445 7 540 0 11500 0 00455 0 445 7 540 0 11500 0 00455 0 445 7 540 0 11500 0 00455 0 0455 0 6800 0 11500 0 01500	799500
0 18500 0 00455 0 445 7 540 1 14000 0 01932 0 445 7 540 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 03741
1 40800	0.03928
0 11100 0 00276 0 445 7 540 7 640 7	0.03500
0 USUNDO 0 USUNDO 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
0 00001 0 405 7 540 0 101274 0 405 7 540 0 101274 0 405 7 540 0 101124 0 405 7 540 0 101124 0 101124 0 101124 0 101124 0 101124 0 101124 0 101124 0 101124 0 101124 0 10112 0 10112 0 10112 0 10112 0 10112 0 10112 0 10112 0 10112 0 10112	1 10350 0
0.01279 0.465 7.540 0.0127 0.465 7.540 0.01124 0.367 6.600 0.01126 0.367 6.600 0.01218 0.367 6.600 0.01218 0.367 6.600 0.01218 0.367 6.600 0.01213 0.367 6.600 0.01213 0.367 6.600 0.01213 0.367 6.600 0.01212 0.367 6.600 0.01212 0.367 6.600 0.01212 0.367	0.03670
0.01127 0.405 7.540 0.01120 0.307 0.600 0.01120 0.307 0.600 0.01160 0.307 0.600 0.01165 0.307 0.600 0.01165 0.307 0.600 0.0121 0.307 0.600	0.03610
0.01220 0.387 0.880 0.01156 0.367 0.880 0.01156 0.367 0.880 0.01218 0.367 0.880 0.01213 0.367 0.880 0.01213 0.367 0.880 0.01213 0.367 0.880	0.03629
0.01156 0.367 6.800 0.01156 0.367 6.800 0.01156 0.367 6.800 0.0156 0.367 6.800 0.01153 0.367 6.800 0.01153 0.367 6.800 0.01212 0.367 0.960	0 03628
0.01216 0.347 0.000 0.01216 0.347 0.000 0.01216 0.347 0.040 0.01213 0.347 0.000 0.0122 0.347 0.000	0.03626
0.01106 0.304 6.000 0.01216 0.307 0.000 0.0123 0.304 6.000 0.0123 0.304 6.000	0.03426
0.01216 0.367 0.000 0.01166 0.367 0.000 0.01103 0.367 0.000 0.01212 0.367 0.000	0.63626
0.01166 0.307 0.000 0.01103 0.307 0.000 0.01103 0.307 0.000	0.03628
0.01213 0.307 8.000 0.01103 0.367 0.000 0.01212 0.367 0.000	97900
0.01163 0.367 0.000 0.01212 0.367 0.000	0.03626
0.01212 0.363 0.000	0.03626
	0 03626

10 10 10 10 10 10 10 10	1143 0 0 0 0 0 0 0 0 0	3	1.143	0.1010	0.03626	0 56100	0.01162	786.0	000	
1144 0 0 0 0 0 0 0 0 0	1144 0 0 0 0 0 0 0 0 0	8	1.143	0.1010	0.03626	0.59600	0.01210	796.0	6.880	9790.0
1143 0 1010 0.002020 0.56400 0.01174 0.937 0.990 0.01174 0.1174 0.1010 0.002020 0.56400 0.01174 0.137 0.002020 0.56400 0.01174 0.137 0.002020 0.56400 0.01174 0.137 0.002020 0.56400 0.01174 0.137 0.002020 0.56400 0.01174 0.137 0.002020 0.56400 0.01174 0.137 0.002020 0.56400 0.01174 0.137 0.002020 0.56400 0.01174 0.137 0.002020 0.56400 0.01174 0.002020 0.56400 0.01174 0.002020 0.002020 0.002020 0.002020 0.002020 0.002020 0.002020 0.002020 0.001174 0.002020 0.002020 0.002020 0.001174 0.002020 0.002020 0.001174 0.002020 0.002020 0.001174 0.002020 0.002020 0.001174 0.002020 0.002020 0.001174 0.002020 0.001174 0.002020 0.002020 0.001174 0.002020 0.001174 0.002020 0.001174 0.002020 0.002020 0.001104 0.002020 0.001104 0.002020 0.001104 0.002020 0.001104 0.002020 0.001104 0.002020 0.001104 0.002020 0.001104 0.002020 0.001104 0.002020 0.001104 0.002020 0.001104 0.002020 0.001104 0.002020 0.001104 0.002020 0.001104 0.002020 0.001104 0.002020 0.001104 0.002020 0.001104 0.002020 0.001104 0.002020 0.001104 0.002020 0.001104 0.002020 0.002020 0.001104 0.002020 0.001104 0.002020 0.001104 0.002020 0.001104 0.002020 0.001104 0.002020 0.001104 0.002020 0.0020	1144 0 0 0 0 0 0 0 0 0	3	1.143	0.1019	0.03626	0.55900	0.01146	0.367	6 880	0.0828
1143 0.1019 0.002828 0.65000 0.01140 0.0347 0.0401 0.04028 0.65000 0.01140 0.0347 0.04028 0.65000 0.01140 0.0347 0.04028 0.65000 0.01140 0.0347 0.04028 0.65000 0.01140 0.0347 0.04028 0.65000 0.01140 0.0347 0.04028 0.65000 0.01140 0.0347 0.04028 0.65000 0.01140 0.0347 0.04028 0.65000 0.01140 0.0347 0.04028 0.65000 0.01140 0.0347 0.04028 0.65000 0.01140 0.0347 0.04028	1143 0.1019 0.002828 0.65000 0.01140 0.0347 0.0000 0.01140 0.04140 0.0000 0.04140 0.04	20	1.143	0.1019	0.03626	0.59600	0.01207	0 367	6.840	0.0867
1143 0.1019 0.003228 0.65000 0.01140 0.0347 0.000228 0.65000 0.01141 0.0347 0.003228 0.65000 0.01141 0.0347 0.003228 0.65000 0.01141 0.0347 0.00322 0.65000 0.01141 0.0347 0.00322 0.65000 0.01141 0.0347 0.00022	1143 0.1019 0.003263 0.65700 0.01176 0.0347 0.0407 1.143 0.1019 0.003263 0.65400 0.01176 0.0347 0.0407 1.143 0.1019 0.003263 0.65400 0.01174 0.0347 0.0407 0.	2	1.143	0.1010	0.03628	0.55800	0.01147	0.367	0.880	0.0826
1143 0.1019 0.003226 0.5400 0.01144 0.0347 0.04014 0.04014 0.04014 0.04022 0.5400 0.01144 0.04014 0.04022 0.5400 0.01124 0.04014 0	1143 0.1019 0.002826 0.54400 0.01144 0.0347 0.04014	22	1.143	0.1010	0.03626	0.59500	0.01206	0.367	0.660	0.0866
1143 0 1019 0.03529 0.54400 0.01144 0.347 0.8490 0.01144 0.347 0.8490 0.01144 0.347 0.8490 0.01144 0.347 0.8490 0.01144 0.347 0.8490 0.01144 0.347 0.8490 0.01144 0.347 0.8490 0.01144 0.347 0.8490 0.01144 0.347 0.8490 0.01144 0.347 0.8490 0.01144 0.347 0.8490 0.01144 0.347 0.8490 0.01144 0.347 0.8490 0.01144 0.347 0.8490 0.01144 0.347 0.8490 0.9490 0.91144 0.347 0.8490 0.9490 0	1143 0.1019 0.03525 0.54400 0.01144 0.347 0.880 0.1144 0.1019 0.03525 0.54400 0.01144 0.347 0.880 0.1144 0.1019 0.03525 0.54500 0.01140 0.347 0.880 0.1144 0.1019 0.03525 0.54200 0.01120 0.347 0.880 0.1144 0.1019 0.03525 0.54200 0.01130 0.347 0.880 0.1144 0.1019 0.03525 0.54200 0.01130 0.347 0.880 0.1144 0.1019 0.03525 0.54200 0.01130 0.347 0.880 0.1144 0.1019 0.03525 0.54200 0.01130 0.347 0.880 0.1144 0.1019 0.03525 0.54200 0.01130 0.347 0.880 0.1144 0.1019 0.03525 0.54200 0.01130 0.347 0.880 0.1144 0.1019 0.03525 0.54200 0.01130 0.347 0.880 0.1144 0.1019 0.03525 0.54200 0.01120 0.347 0.880 0.1144 0.1019 0.03525 0.54200 0.01100 0.347 0.880 0.4114 0.1019 0.03525 0.54200 0.01100 0.347 0.880 0.4114 0.1019 0.03525 0.54200 0.01100 0.347 0.880 0.4114 0.1019 0.03525 0.54200 0.01100 0.347 0.880 0.4114 0.1019 0.03525 0.54200 0.01100 0.347 0.880 0.4114 0.1019 0.03525 0.54200 0.01100 0.347 0.4414 0.1019 0.03525 0.54200 0.01100 0.347 0.4414 0.1019 0.03525 0.54200 0.01100 0.347 0.4414 0.1019 0.03525 0.54200 0.01100 0.3414 0.4414 0.1019 0.03525 0.54200 0.01100 0.0425 0.4414 0.1014 0.03526 0.54200 0.01100 0.0425 0.4414 0.0352 0.4414 0.0352 0.0445 0.0445 0.0445 0.0445 0.4445 0.4445 0.0445 0.0445 0.0445 0.0445 0.0445 0.0445 0.4445 0.0445 0.0445 0.0445 0.4445 0.0445 0.0445 0.4445 0.4445 0.0445 0.0445 0.4445 0.0445 0.0445 0.0445 0.4445 0.0445 0.0445 0.0445 0.4445 0.0445	8 2	1.143	0.1010	0.03626	0.55700	0.01145	0.367	6.880	0.0824
1143 0 1010 0.03828 0.65400 0.01140 0.387 6.890 1143 0 1010 0.02828 0.65200 0.01130 0.387 6.890 1144 0 1010 0.02828 0.65200 0.01130 0.387 6.890 1144 0 1010 0.02828 0.65200 0.01130 0.387 6.890 1144 0 1010 0.02828 0.65200 0.01130 0.387 6.890 1145 0 1010 0.02828 0.6400 0.01130 0.387 6.890 1145 0 1010 0.02828 0.6400 0.01130 0.387 6.890 1145 0 1010 0.02828 0.6400 0.01130 0.387 6.890 1145 0 1010 0.02828 0.6400 0.01130 0.387 6.890 1145 0 1010 0.02828 0.6400 0.01100 0.387 6.890 1145 0 1010 0.02828 0.6400 0.01100 0.387 6.890 1145 0 1010 0.02828 0.6400 0.01100 0.387 6.890 1145 0 1010 0.02828 0.6400 0.01100 0.387 6.890 1145 0 1010 0.02828 0.6400 0.01100 0.387 6.890 1145 0 1010 0.02828 0.6400 0.01100 0.387 6.890 1145 0 1010 0.02828 0.6400 0.01100 0.387 6.890 1145 0 1010 0.02828 0.6400 0.01100 0.387 6.890 1145 0 1010 0.02828 0.6400 0.01100 0.387 6.890 1146 0 1010 0.02828 0.6400 0.01100 0.387 6.890 1147 0 1010 0.02828 0.6400 0.01100 0.387 6.800 1148 0 1010 0.02828 0.6400 0.01101 0.226 0.400 1149 0 1010 0.02828 0.6400 0.01101 0.425 0.400 1140 0 1010 0.02828 0.6400 0.01101 0.425 0.400 1140 0 1010 0.02828 0.6100 0.01101 0.425 0.400 1140 0 1010 0.02828 0.6100 0.01101 0.425 0.400 1140 0 1001 0.02828 0.6100 0.01101 0.425 0.400 1140 0 1001 0.02828 0.6100 0.01101 0.425 0.400 1140 0 1001 0.02828 0.6100 0.01101 0.425 0.400 1140 0 1001 0.02828 0.6100 0.02021 0.6202 0.6200 0.01101 0.6202 0.6200 1140 0 1001 0.02828 0.6100 0.02021 0.6202 0.6200 0.02021 0.6202 0.6202 0.6202 0.6202 0.6202 0.6202 0.6202 0.6202 0.6202 0.6202 0.6202 0.6202 0	1143 0 1010 0.03828 0.65400 0.01140 0.387 0.6900 1144 0 1010 0.003828 0.65400 0.01140 0.387 0.6900 1144 0 1010 0.003828 0.65400 0.01130 0.387 0.6900 1144 0 1010 0.003828 0.65400 0.01130 0.387 0.6900 1144 0 1010 0.003828 0.65400 0.01130 0.387 0.6900 1144 0 1010 0.003828 0.65400 0.01130 0.387 0.6900 1144 0 1010 0.003828 0.6400 0.01130 0.387 0.6900 1144 0.1010 0.003828 0.6400 0.01110 0.387 0.6900 1144 0.1010 0.003828 0.6400 0.01110 0.387 0.6900 0.01110 0.387 0.6900 1144 0.1010 0.003828 0.6400 0.01110 0.387 0.6900 0.01110 0.387 0.6900 0.01110 0.0387 0.6900 0.01110 0.387 0.6900 0.01110 0.00382 0.6200 0.01110 0.387 0.6900 0.01110 0.00382 0.6200 0.01110 0.0387 0.6900 0.01110 0.0387 0.6900 0.01110 0.0387 0.6900 0.01110 0.0387 0.6900 0.01110 0.0387 0.6900 0.01110 0.0387 0.6900 0.01110 0.0387 0.6900 0.01110 0.0387 0.6900 0.01110 0.0387 0.6900 0.01110 0.0387 0.6900 0.01110 0.0387 0.6900 0.01110 0.0288 0.0040 0.01110 0.0288 0.0040 0.01110 0.0288 0.0040 0.01110 0.0289 0.0040 0.01110 0.0289 0.0040 0.01110 0.0289 0.0040 0.01110 0.0289 0.0040 0.01110 0.0289 0.0040 0.01110 0.0289 0.0040 0.01110 0.0289 0.0040	5 9	1.143	0.1010	0.03626	0.59400	0.01204	0.367	6.880	0.0864
1143 0.1019 0.00020 0.01130 0.391 0.600 1143 0.1019 0.00020 0.05100 0.01130 0.391 0.600 1143 0.1019 0.00020 0.05100 0.01130 0.391 0.600 1143 0.1019 0.00020 0.05100 0.01130 0.391 0.600 1143 0.1019 0.00020 0.05100 0.01130 0.391 0.600 1143 0.1019 0.00020 0.05100 0.01130 0.391 0.600 1143 0.1019 0.00020 0.05100 0.01130 0.391 0.600 1143 0.1019 0.00020 0.05100 0.01130 0.391 0.600 1143 0.1019 0.00020 0.05100 0.01130 0.391 0.600 1144 0.1019 0.00020 0.0000 0.01110 0.391 0.600 1144 0.1019 0.00020 0.0000 0.01110 0.391 0.600 1145 0.1019 0.00020 0.0500 0.01100 0.391 0.600 1146 0.1019 0.00020 0.0500 0.01100 0.391 0.600 1149 0.1019 0.00020 0.0500 0.01100 0.391 0.600 1149 0.1019 0.00020 0.0500 0.01100 0.391 0.600 1149 0.1019 0.00020 0.0500 0.01100 0.391 0.000 1140 0.1019 0.00020 0.0500 0.01101 0.020 0.010 1140 0.1019 0.00020 0.0500 0.01101 0.020 0.010 1140 0.1019 0.00020 0.01101 0.020 0.0110 0.020 1140 0.1019 0.00020 0.01101 0.020 0.0110 0.020 1140 0.1019 0.00020 0.01101 0.020 0.0110 0.020 1140 0.1019 0.00020 0.01101 0.020 0.0110 0.020 1140 0.1010 0.00020 0.01101 0.020 0.000 1140 0.1010 0.00020 0.01101 0.020 0.000 1140 0.1010 0.00020 0.01101 0.0000 0.0110 0.020 1140 0.1010 0.00020 0.01101 0.0000 0.0110 0.0000 1140 0.1010 0.00020 0.01101 0.0000 0.0110 0.0000 1140 0.1010 0.00020 0.01101 0.0000 0.0110 0.0000 1140 0.1010 0.00020 0.01101 0.0000 0.0110 0.0000 1140 0.1010 0.00020 0.01101 0.0000 0.0110 0.0000 1140 0.1010 0.00020 0.00000 0.01101 0.00000 0.0110 0.00000 1140 0.1010 0.00000 0.00000 0.01100 0.00000 0.0110 0.00000 1140 0	1143 0 1010 0.00222 0.54500 0.01120 0.347 0.6400 0.01120 0.347 0.4400 0.01120 0.347 0.4400 0.01120 0.347 0.4400 0.01120 0.342 0.4400 0.01120 0.342 0.4400 0.01120 0.342 0.4400 0.01120 0.342 0.4400 0.01120 0.02000 0.01120 0.02000 0.01120 0.02000 0.01120 0.02000 0.01120 0.02000 0.01120 0.02000 0.01120 0.02000 0.01120 0.02000 0.01120 0.02000 0.01120 0.02000 0.01120 0.02000 0.02000 0.01120 0.02000 0.	7 5	25.	0.1010	0.03626	0.65400	0.01140	0.367	0.000	0.0621
1143	1143	2 3	2 2 2	20.0	0.03626	0.50300	0.01202	0.367	0.000	0.0663
1143 0.1019 0.00020 0.01191 0.387 0.880 1143 0.1019 0.00020 0.05100 0.01118 0.387 0.880 1143 0.1019 0.00020 0.05100 0.01118 0.387 0.880 1143 0.1019 0.00020 0.05100 0.01118 0.387 0.880 1143 0.1019 0.00020 0.05100 0.01119 0.387 0.880 1143 0.1019 0.00020 0.05100 0.01110 0.387 0.880 1143 0.1019 0.00020 0.05100 0.01110 0.387 0.880 1143 0.1019 0.00020 0.05100 0.01110 0.387 0.880 1144 0.1019 0.00020 0.05100 0.01110 0.387 0.880 1145 0.1019 0.00020 0.05100 0.01110 0.387 0.880 1146 0.1019 0.00020 0.05100 0.01110 0.387 0.880 1147 0.1019 0.00020 0.05100 0.01110 0.387 0.880 1148 0.1019 0.00020 0.05100 0.01110 0.387 0.880 1149 0.1019 0.00020 0.05100 0.01110 0.387 0.880 1149 0.1019 0.00020 0.05100 0.01110 0.387 0.880 1149 0.1019 0.00020 0.05100 0.01110 0.0212 0.480 1149 0.1019 0.00020 0.01110 0.0212 0.420 0.010 1140 0.1019 0.00020 0.01110 0.0212 0.420 0.010 1140 0.1019 0.00020 0.01110 0.0207 0.420 0.010 1140 0.1019 0.00020 0.01110 0.0207 0.420 0.010 1140 0.1019 0.00020 0.01110 0.0207 0.420 0.010 1140 0.1019 0.00020 0.01110 0.0207 0.420 0.010 1140 0.1019 0.00020 0.01110 0.0207 0.420 0.010 1140 0.1019 0.00020 0.01110 0.0207 0.420 0.010 1140 0.1019 0.00020 0.01110 0.0207 0.420 0.010 1140 0.1019 0.00020 0.01101 0.0207 0.420 0.010 1140 0.1010 0.00020 0.01101 0.0207 0.420 0.010 1140 0.1010 0.00020 0.01101 0.0207 0.420 0.0000 1141 0.1010 0.00020 0.01101 0.0000 0.420 0.420 0.0000 1141 0.1010 0.00020 0.01101 0.0000 0.420 0.420 0.0000 1141 0.1010 0.00020 0.01010 0.00000 0.420 0.420 0.0000 1141 0.1010 0.00020 0.00020 0.01101 0.00020	1143 0.1010 0.00260 0.05100 0.01136 0.367 0.600 0.01141 0.1016 0.00260 0.05100 0.01136 0.367 0.6000 0.11141 0.0262 0.05000 0.011140 0.037 0.6000 0.11141 0.0262 0.054000 0.011140 0.037 0.6000 0.01141 0.037 0.6000 0.01141 0.037 0.6000 0.01141 0.037 0.6000 0.01141 0.037 0.6000 0.01141 0.037 0.6000 0.01141 0.037 0.6000 0.01141 0.037 0.6000 0.01141 0.037 0.6000 0.01141 0.037 0.6000 0.01141 0.037 0.0000 0.01141 0.037 0.0000 0.01141 0.037 0.0000 0.01141 0.037 0.0000 0.01141 0.037 0.0000 0.01141 0.037 0.0000 0.01141 0.037 0.0000 0.01141 0.037 0.0000 0.01141 0.037 0.0000 0.01141 0.037 0.0400 0.01141 0.037 0.0400 0.01141 0.037 0.0400 0.01141 0.037 0.0400 0.01141 0.037 0.0400 0.01141 0.037 0.0400 0.01141 0.037 0.0400 0.037 0.0400 0.04141 0.037 0.0400 0.037 0.0400 0.04141 0.037 0.0400 0.037 0.0400 0.04141 0.037 0.0400 0.037 0.0400 0.04141 0.0400 0.0320 0.04141 0.0400 0.0320 0.04141 0.0400 0.0320 0.0400 0.04141 0.0400 0.0320 0.0400 0.04141 0.0400 0.0320 0.0400 0.04141 0.0400 0.0320 0.0400 0.04141 0.0400 0.0320 0.0400 0.04141 0.0400 0.0320 0.0400 0.04141 0.0400 0.0320 0.0400 0.04141 0.0400 0.0320 0.0400 0.04	2 19	2 2	0.010	0.03026	0.55300	0.01130	0.367	6.660	0.0820
1143 0 1019 0 10500 0 10100 0 347 0 1000 1144 0 1019 0 10300 0 10100 0 1347 0 1000 1144 0 1019 0 10300 0 10100 0 10300 0 10100 0 1347 0 1000 1144 0 1019 0 10300 0 10110 0 1347 0 1000 1144 0 1019 0 10300 0 10110 0 1347 0 1000 1144 0 1019 0 10300 0 10110 0 10300 0 10110 0 1347 0 1000 1144 0 1019 0 10300 0 10110 0 10300 0 10110 0 1347 0 1000 1144 0 1019 0 10300 0 10110 0 1347 0 1000 0 10110 0 10300 0 10110 0 1347 0 1000 1144 0 1019 0 10300 0 10110 0 10300 0 10100 0 10300 0 10100 0 10300 0 10100 0 10300 0 10100 0 10300 0 10100 0 10300 0 10100 0 10300 0 100000 0 10000 0 10000 0 10000 0 10000 0 10000 0 10000 0 100000 0 100000 0 1000	1143 0.1019 0.02626 0.02000 0.011195 0.367 0.0000 0.011195 0.0200 0.011195 0.0200 0.011195 0.0200 0.011195 0.0200 0.011195 0.0200 0.011195 0.0200 0.011195 0.0200 0.011195 0.0200 0.011195 0.0200 0.011195 0.0200 0.0200 0.011195 0.0200 0.0200 0.011195 0.0200 0.	92	1.143	0.101.0	0.03626	0.56100	10210.0	0.367	6.880	0.0862
1143 0 1019 0 00926 0 04600 0 0119 0 0367 0 6800 1144 0 1019 0 00926 0 04600 0 01116 0 0367 0 6800 1144 0 1019 0 00926 0 04000 0 01112 0 0367 0 6800 1144 0 1019 0 00926 0 04000 0 01112 0 0367 0 6800 0 1114 0 1019 0 00926 0 04000 0 01112 0 0367 0 6800 0 1114 0 0367 0 6800 0 01112 0 0367 0 6800 0 1114 0 0367 0 6800 0 01112 0 0367 0 6800 0 1114 0 0367 0 6800 0 1114 0 0367 0 6800 0 1114 0 0367 0 6800 0 01112 0 0367 0 6800 0 1114 0 0367 0 6800 0 01112 0 0367 0 6800 0 1114 0 0367 0 6800 0 01112 0 0367 0 6800 0 1114 0 0367 0 6800 0 1114 0 0367 0 6800 0 01116 0 0367 0 6800 0 01116 0 0367 0 6800 0 01116 0 0367 0 6800 0 01116 0 0367 0 6800 0 01116 0 0367 0 6800 0 01116 0 0367 0 6800 0 01116 0 0367 0 6800 0 01160 0 0367	1143 0 1019 0 003028 0 04400 0 01194 0 0347 0 4800 0 1144 0 1019 0 003028 0 04400 0 011144 0 0347 0 6800 0 1144 0 1019 0 003028 0 04400 0 011142 0 0347 0 6800 0 1144 0 1019 0 003028 0 04400 0 011142 0 0347 0 6800 0 1144 0 1019 0 003028 0 04600 0 011142 0 0347 0 6800 0 1144 0 1019 0 003028 0 04600 0 011142 0 0347 0 6800 0 1144 0 1019 0 003028 0 04600 0 011142 0 0347 0 6800 0 1144 0 1019 0 003028 0 04600 0 011142 0 0347 0 6800 0 1144 0 1019 0 003028 0 04000 0 011147 0 0440 0 04400 0 01104 0 0447 0 0441 0 04400 0 01104 0 0441 0 04400 0 01104 0 04400	-	1.143	0.1010	0.03626	000000	601100	1900	6.880	0.0017
1143 0 1019 0 103258 0 10400 0 10116 0 1347 0 1049 0 103258 0 10400 0 10116 0 1347 0 1049 0 10119 0 103258 0 10400 0 10117 0 1347 0 1049 0 103258 0 10400 0 10117 0 1347 0 1049 0 103258 0 10400 0 10117 0 1347 0 1049 0 103258 0 10400 0 10110 0 103459 0 10110 0 103459 0 10040 0 10041 0 103459 0 10040 0 10041 0 103459 0 10040 0 10041 0 103459 0 10040 0 10041 0 103459 0 10040 0 10041 0 103459 0 10040 0 10041 0 103459 0 10040 0 10041 0 103459 0 10040 0 10041 0 103459 0 10040 0 10041 0 103459 0 10040 0 10041 0 103459 0 10040 0 10041 0 103459 0 10040 0 10041 0 103459 0 10040 0 10041 0 103459 0 10040 0 10041 0 103459 0 10040 0 10041 0 103459 0 10040 0 10041 0 10041	1143 0 0 0 0 0 0 0 0 0	9	1.143	0.1019	0 03626	0.54800	92100	1000	0.880	0.0860
1143 0 0 0 0 0 0 0 0 0	1143 0 1019 0 03250 0 05400 0 10112 0 341 0 6800 1143 0 1019 0 03256 0 05400 0 01112 0 341 0 6800 1144 0 1019 0 03256 0 05400 0 01112 0 341 0 6800 1143 0 1019 0 03256 0 05400 0 01102 0 341 0 6800 1143 0 1019 0 03256 0 05400 0 01102 0 341 0 6800 1143 0 1019 0 03256 0 05400 0 01102 0 341 0 6800 1144 0 1019 0 03256 0 05400 0 01102 0 341 0 6800 1145 0 1019 0 03256 0 05400 0 01102 0 341 0 6800 1145 0 1019 0 03252 0 05400 0 01102 0 341 0 4800 1145 0 1019 0 03252 0 05400 0 01102 0 341 1540 1145 0 1019 0 03252 0 05400 0 01102 0 341 1440 1145 0 1019 0 03250 0 05400 0 01102 0 342 1440 1145 0 1019 0 03250 0 05400 0 01102 0 342 1440 1145 0 1019 0 03250 0 05400 0 01102 0 225 1540 1145 0 1019 0 03250 0 05400 0 01102 0 225 1540 1145 0 1019 0 03250 0 05400 0 01102 0 225 1540 1146 0 1019 0 03250 0 05400 0 01102 0 425 1540 1147 0 1019 0 03250 0 05400 0 01102 0 425 1540 1148 0 1019 0 03250 0 05400 0 01103 0 425 1540 1149 0 10102 0 03250 0 0400 0 01104 0 455 1540 1140 0 10102 0 03250 0 0400 0 01104 0 465 1540 1190 0 10102 0 03250 0 0400 0 0455 1540 1190 0 10102 0 03250 0 0400 0 0455 1540 1190 0 10102 0 03250 0 0400 0 0455 1540 1190 0 10102 0 03250 0 0400 0 0455 1540 1190 0 10102 0 03250 0 0400 0 0455 1540 1190 0 10102 0 03250 0 0400 0 0455 1540 1190 0 10102 0 03250 0 0400 0 0455 1540 1190 0 10102 0 03250 0 0400 0 0455 1540 1100 0 10102 0 03250 0 0400 0 0455 1540 1100 0 10102 0 03250 0 0400 0 0455 1540 1100 0 10102 0 03250 0 0400 0 0455 1540 1100 0 10102 0 03250 0 0400 0 0455 1540 1100 0 10102 0 03250 0 0400 0 0455 1540 1	2	1.143	0.1010	0.03626	0.0950	901100	96.0	9 6 600	0.0614
1143 0 0 0 0 0 0 0 0 0	1143 0 0 0 0 0 0 0 0 0	•	1.143	0.1019	0.03626	0.54500	0.01136	7000	9.860	0.0850
1143 0.1019 0.03026 0.54000 0.01117 0.351 0.6000 1144	1144 0.1019 0.03926 0.54000 0.1111 0.341 0.5401 0.1019 0.03526 0.54000 0.1111 0.341 0.5401 0.1114 0.1019 0.03826 0.54000 0.01102 0.347 0.6400 0.1114 0.1019 0.03826 0.54000 0.01102 0.347 0.6400 0.1144 0.1019 0.03826 0.54000 0.01102 0.347 0.6400 0.1144 0.1019 0.03826 0.54000 0.01167 0.041 0.441 0.1019 0.03826 0.54100 0.01164 0.341 0.441 0.1019 0.03826 0.54100 0.01164 0.341 0.441 0.1019 0.03826 0.54100 0.01164 0.312 0.441 0.1019 0.03826 0.54100 0.01164 0.312 0.441 0.1019 0.03826 0.54000 0.01164 0.312 0.442 0.441 0.1019 0.03826 0.54000 0.01161 0.422 0.442 0.441 0.442 0.4420 0.04164 0.4420 0.04164 0.4420	-	1.143	0.101.0	0.03626	0.58200	0.01100	195.0	0.000	0 0010
1143 0 1019 0 103826 0 15500 0 01102 0 350 0 6800 1143 0 1019 0 103826 0 15500 0 01100 0 350 0 6800 1143 0 1019 0 103826 0 15500 0 01100 0 350 0 6800 1143 0 1019 0 103826 0 10500 0 01100 0 350 0 6800 1144 0 1019 0 103826 0 10300 0 01100 0 130 0 140 1145 0 1019 0 103822 0 10300 0 11100 0 1041 0 130 1146 0 1019 0 103822 0 10300 0 11100 0 1041 0 130 1147 0 11010 0 103822 0 10410 0 10410 0 130 0 140 1148 0 11010 0 103820 0 10410 0 10410 0 130 0 140 1149 0 11010 0 103820 0 10410 0 10410 0 10410 0 10410 1140 0 11010 0 103820 0 10410 0 10410 0 10410 0 10410 1140 0 11010 0 103820 0 10410 0 10410 0 10410 0 10410 1140 0 11010 0 103820 0 10000 0 11110 0 125 1540 1140 0 11010 0 103820 0 10000 0 11110 0 125 1540 1140 0 11010 0 103820 0 10000 0 11110 0 1420 0 140 1140 0 11010 0 103820 0 10000 0 11110 0 1420 0 140 1110 0 11010 0 103820 0 10000 0 1450 0 1450 0 1450 1110 0 10101 0 103820 0 10000 0 1450 0 1450 0 1450 1110 0 10101 0 103820 0 10000 0 1450 0 1450 1110 0 10101 0 103820 0 10000 0 1450 0 1450 1110 0 10101 0 103820 0 10000 0 1450 0 1450 1110 0 10101 0 103820 0 10000 0 1450 0 1450 1110 0 10101 0 103820 0 1450 0 1450 0 1450 1110 0 10101 0 103820 0 1450 0 1450 0 1450 1110 0 10101 0 103820 0 1450 0 1450 0 1450 1110 0 10101 0 103820 0 1450 0 1450 0 1450 1110 0 10101 0 103820 0 1450 0 1450 0 1450 1110 0 10101 0 103820 0 1450 0 1450 0 1450 1110 0 10101 0 103820 0 1450 0 1450 0 1450 1110 0 10101 0 103820 0 1450 0 1450 0 1450 1110 0 10101 0 103820 0 1450 0 1450 0 1450 1110 0 10101 0 103820 0 1450 0 1450 0 1450 1110 0 10101 0 103820 0 1450 0 14	1143 0 1010 0 103026 0 10400 0 11112 0 1367 0 1000		1.143	0.1019	0.03626	0.64000	0.01117	25.0	0000	0.0857
1143 0 1019 0.03926 0.53300 0.01106 0.397 0.0466 1143 0 1019 0.03926 0.52500 0.01102 0.0397 0.0466 1143 0.1019 0.03926 0.52500 0.01102 0.237 0.0466 1.143 0.1019 0.03926 0.52500 0.01102 0.0217 0.0114 0.02428 0.02520 0.01105 0.0411 0.04428 0.02429 0.01105 0.0411 0.04429 0.01105 0.0411 0.04429 0.01105 0.0411 0.04429 0.01105 0.0411 0.0411 0.04429 0.01105 0.0411 0.	1.143 0.1019 0.03928 0.53300 0.01105 0.367 0.0000000000000000000000000000000000	•	1.143	0.1019	0.03626	0.56600	0.01192	0.967	6 880	0.000
1.143	1143 0 1010 0.03628 0.05500 0.01100 0.387 0.880 1143 0 1010 0.03628 0.05500 0.01100 0.387 0.880 1144 0 1010 0.03628 0.05500 0.01102 0.031 0.041 1144 0.1021 0.03628 0.05400 0.01104 0.051 0.041 1145 0.1021 0.03628 0.05400 0.01104 0.031 0.041 1146 0.1030 0.03628 0.58100 0.01184 0.031 0.041 1147 0.1019 0.03628 0.58100 0.01184 0.031 0.041 1143 0.1019 0.03628 0.58000 0.01184 0.031 0.054 1144 0.1019 0.03628 0.58000 0.01184 0.031 0.054 1145 0.1019 0.03628 0.58000 0.01184 0.031 0.042 1145 0.1019 0.03628 0.58000 0.01181 0.025 0.040 1145 0.1019 0.03628 0.58000 0.01181 0.025 0.040 1145 0.1019 0.03628 0.58000 0.01181 0.025 0.040 1146 0.1019 0.03628 0.58000 0.01181 0.025 0.040 1147 0.1019 0.03628 0.58000 0.01181 0.025 0.040 1149 0.1019 0.03628 0.58000 0.01181 0.025 0.040 1140 0.1018 0.03628 0.0004 0.0005 0.0005 0.0005 1180 0.1018 0.03628 0.0004 0.0005 0.0005 0.0005 1180 0.1018 0.03628 0.1100 0.0005 0.0005 0.0005 1190 0.0004 0.0002 0.0005 0.0005 0.0005 0.0005 1104 0.1018 0.03628 0.1100 0.0005 0.0005 0.0005 0.0005 1104 0.0004 0.0005 0.0005 0.0005 0.0005 0.0005 0.0005 1104 0.1018 0.03628 0.1100 0.0005 0.0005 0.0005 0.0005 0.0005 1104 0.1018 0.03628 0.0005	•	1.143	0.1010	0.03626	0.53300	0.01108	0.367	6.800	0.0303
1143 0 1010 0 03626 0 56500 0 0310 0 0367 0 6800 1143 0 1010 0 103626 0 56500 0 01100 0 0367 0 6800 1144 0 11010 0 103626 0 055300 0 011167 0 0541 7 540 1144 0 11010 0 103626 0 56300 0 011167 0 0541 7 540 1144 0 11010 0 103626 0 56100 0 011164 0 312 7 540 1144 0 11010 0 103626 0 56000 0 011164 0 312 7 540 1145 0 11010 0 103626 0 56000 0 011164 0 312 7 540 1145 0 11010 0 103626 0 56000 0 011164 0 312 7 540 1145 0 11010 0 103626 0 56000 0 011161 0 0255 7 540 1145 0 11010 0 103626 0 57000 0 011161 0 0255 7 540 1145 0 11010 0 103626 0 57000 0 011161 0 0420 1146 0 11010 0 103626 0 56000 0 011161 0 0420 1146 0 11010 0 103626 0 56000 0 011161 0 0420 1146 0 11010 0 103626 0 56000 0 011161 0 0420 1146 0 11010 0 103626 0 65000 0 01116 0 0420 1146 0 11010 0 103626 0 105000 0 01116 0 0420 1147 0 11010 0 103626 0 105000 0 0465 7 540 1148 0 11011 0 103826 0 105000 0 0465 7 540 1149 0 11011 0 103826 0 100043 1 0 0465 7 540 1140 0 11011 0 103826 0 100043 1 0 0465 7 540 1140 0 11011 0 103826 0 100043 1 0 0465 7 540 1140 0 11011 0 103826 0 100043 1 0 0465 7 540 1101 0 10101 0 103826 0 100043 1 0 0465 7 540 1101 0 10101 0 103826 0 100043 1 0 0465 7 540 1101 0 10101 0 103827 0 100043 1 0 0465 7 540 1101 0 10101 0 103827 0 100043 1 0 0465 7 540 1101 0 10101 0 103827 0 100040 0 0465 7 540 1101 0 10101 0 103827 0 100043 1 0 0465 7 540 1101 0 10101 0 103827 0 100043 1 0 0465 7 540 1101 0 10101 0 103827 0 100043 1 0 0465 7 540 1101 0 10101 0 103827 0 100043 1 0 0465 7 540 1101 0 10101 0 103827 0 100043 1 0 0465 7 540 1101 0 10101 0 103827 0 100043 1 0 0465 7 540	1143 0 1019 0 03626 0 05500 0 01100 0 367 0 6800 0 1140 0 10100 0 103626 0 05500 0 01100 0 1051 NA NA NA NA NA NA NA N	49			×2			0.496	N/A	1000
1.143 0.1019 0.03828 0.52500 0.01002 0.3517 0.6591	1143 0.1019 0.03628 0.55500 0.01002 0.3617 0.6614 NAA 1144	•	1.143	0.1010	0.03626	0.58500	0.01190	0.367	09.89	0.0856
1.143 0.1019 0.03626 0.655300 0.01167 0.6516 NAA 1.154 0.1021 0.03622 0.655400 0.01168 0.6511 7640 1.154 0.1021 0.03622 0.655400 0.01168 0.6511 7640 1.154 0.1019 0.03626 0.65100 0.01164 0.312 7.540 1.155 0.1019 0.03626 0.65100 0.01164 0.312 7.540 1.155 0.1019 0.03626 0.65100 0.01162 0.255 7.540 1.155 0.1019 0.03626 0.67100 0.01161 0.226 7.540 1.155 0.1019 0.03626 0.67100 0.01161 0.429 0.040 1.155 0.1019 0.03626 0.67100 0.01161 0.429 0.040 1.155 0.1019 0.03626 0.67100 0.01161 0.429 0.040 1.156 0.1019 0.03626 0.67100 0.01161 0.429 0.040 1.156 0.1019 0.03626 0.67100 0.01176 0.429 0.040 1.156 0.1019 0.03626 0.67100 0.01176 0.429 0.040 1.156 0.1019 0.03626 0.67100 0.02025 0.465 7.540 0.1020 0.1032 0.03629 0.16100 0.0322 0.465 7.540 0.2020 0.1021 0.03629 0.03629 0.03629 1.540 0.2020 0.1021 0.03629 0.03629 1.5400 0.03629 1.540 0.2020 0.1021 0.03629 0.03629 1.5400 0.03629 1.540 0.2020 0.1021 0.03629 0.03629 1.5400 0.03629 1.540 0.2020 0.1021 0.03629 0.03629 1.5400 0.03629 1.540 0.2020 0.1021 0.03629 0.03629 1.5400 0.03629 1.540	1.143		1.143	0.1010	0.03626	0.62500	0.01092	0.367	0.880	0.0788
1.1200 0.05820 0.05165 0.0516 0.0516 0.0516 0.0516 0.0516 0.0516 0.0516 0.0516 0.0516 0.0516 0.0516 0.0516 0.0516 0.0516 0.0516 0.0517 0.0540 0.01164 0.0512 0.0540 0.01164 0.0512 0.0427 0.00500 0.05164 0.0512 0.0427 0.00500 0.05164 0.0512 0.0560 0.05164 0.0512 0.0560 0.05164 0.0512 0.0560 0.05164 0.0526 0.0560 0.05164 0.0526 0.0560 0.05164 0.0526 0.0560 0.05164 0.0526 0.0560 0.05164 0.0526 0.0560 0.05	1.144				*			0.541	NA	0.992
1.144	1.143			0.000	1260			0.518	NA NA	0.900
1.143	1.143		2 3	0.1010	0.03676	0.56300	0.01167	0.541	7.640	0.0935
1.143 0.1019 0.09628 0.58100 0.01184 0.312 NAA 1.148 0.1039 0.09628 0.58100 0.01184 0.312 7.540 NAA 1.240 0.01014 0.03628 0.58000 0.01182 0.255 NAA 1.143 0.1019 0.03628 0.58000 0.01182 0.255 7.540 NAA 1.243 0.1019 0.03628 0.58000 0.01181 0.225 7.540 NAA 1.143 0.1019 0.03628 0.57000 0.01181 0.429 8.040 2.207 0.1046 0.03560 0.57000 0.01181 0.429 8.040 2.207 0.1019 0.03628 0.57000 0.01181 0.429 8.040 1.143 0.1019 0.03628 0.57000 0.01181 0.429 8.040 2.242 0.1019 0.03628 0.57000 0.01181 0.429 8.040 1.144 0.1018 0.03628 0.57000 0.01143 0.465 7.540 1.150 0.1001 0.03628 0.16100 0.00027 0.455 7.540 0.208 0.0004 0.03828 0.16100 0.00031 0.465 7.540 0.208 0.0004 0.03828 0.16100 0.00031 0.465 7.540 0.208 0.0004 0.03828 0.16100 0.00031 0.465 7.540 0.208 0.0004 0.03828 0.16100 0.00031 0.465 7.540 0.208 0.0004 0.03828 0.14500 0.00031 0.465 7.540 0.208 0.0004 0.03828 0.14500 0.00031 0.465 7.540 0.208 0.0004 0.03828 0.14500 0.00031 0.465 7.540 0.208 0.0004 0.03828 0.14500 0.00031 0.465 7.540 0.208 0.0004 0.03867 0.00031 0.465 7.540 0.208 0.0004 0.03867 0.00031 0.0005 7.540 0.208 0.0004 0.03867 0.0005 0.0005 7.540	1143		<u> </u>	1701.0	770577	0.53400	0.01106	1790	7.640	0.0674
1,143 0.1019 0.03626 0.58100 0.01164 0.312 7.540 1,446 0.1030 0.03600 0.67400 0.01314 0.312 7.540 1,143 0.1019 0.03578 0.58000 0.01162 0.255 7.540 2,037 0.1040 0.03578 0.58000 0.01162 0.255 7.540 1,143 0.1019 0.03578 0.58000 0.01161 0.255 7.540 1,143 0.1019 0.03569 0.57000 0.01161 0.426 NA 1,143 0.1019 0.03569 0.57000 0.01161 0.429 8.040 2,507 0.1046 0.03569 0.57000 0.01161 0.429 8.040 2,507 0.1046 0.03569 0.57000 0.01161 0.429 8.040 2,507 0.1046 0.03569 0.57000 0.01149 0.429 8.040 1,104 0.1018 0.03569 0.03509 0.429 0.429 8.040	1.143 0.1019 0.03268 0.58100 0.01164 0.312 7.640 1.446 0.1034 0.03628 0.56100 0.01144 0.312 7.540 1.143 0.1019 0.03628 0.56000 0.01162 0.284 N/A 1.143 0.1040 0.03628 0.56000 0.01162 0.284 N/A 1.143 0.1040 0.03628 0.56000 0.01162 0.284 N/A 1.143 0.1040 0.03628 0.57000 0.01181 0.428 7.540 1.143 0.1046 0.03628 0.57000 0.01181 0.428 1.540 2.507 0.1046 0.03628 0.57600 0.01181 0.428 1.040 2.507 0.1046 0.03628 0.57600 0.01181 0.428 0.04 2.442 0.1044 0.03669 0.57600 0.01149 0.445 1.04 1.143 0.1018 0.03669 0.5600 0.01149 0.465 7.540 </td <td></td> <td></td> <td></td> <td>1 280</td> <td></td> <td></td> <td>0.312</td> <td>X</td> <td>1.717</td>				1 280			0.312	X	1.717
1.446 0.1030 0.03800 0.67400 0.01314 0.312 7.540 NA 1.280 0.0104 0.03826 0.58000 0.01162 0.255 7.540 2.037 0.1040 0.03826 0.58000 0.01162 0.255 7.540 2.037 0.1040 0.03828 0.5800 0.01610 0.255 7.540 1.143 0.1019 0.03828 0.57900 0.01610 0.428 NA 1.143 0.1019 0.03828 0.57900 0.01161 0.429 8.040 2.607 0.1046 0.03828 0.57900 0.01161 0.429 8.040 2.607 0.1044 0.03828 0.57800 0.01169 0.429 8.040 1.144 0.1019 0.03867 0.56500 0.01143 0.429 8.040 1.144 0.10346 0.03867 0.4070 0.02025 0.429 8.040 1.144 0.10346 0.03867 0.03025 0.4050 0.445	1,446 0.1030 0.03800 0.61400 0.01314 0.312 7.540 1,143 0.1019 0.03626 0.56000 0.01182 0.255 N/A 1,143 0.1049 0.03526 0.56000 0.01182 0.255 7.540 2,037 0.1040 0.03578 0.25600 0.01182 0.255 7.540 1,143 0.1019 0.03528 0.57000 0.01181 0.429 8.040 2,207 0.1016 0.03528 0.57000 0.01181 0.429 8.040 2,207 0.1016 0.03528 0.57000 0.01181 0.429 8.040 2,207 0.1016 0.03528 0.57000 0.01181 0.429 8.040 1,143 0.1019 0.03529 0.57000 0.01181 0.429 8.040 1,144 0.1014 0.03529 0.56500 0.01174 0.429 8.040 1,144 0.1014 0.0357 0.03529 0.0459 0.455 7.540		1.143	0.1019	0.03626	0.58100	0.04484	0.427	¥ .	0.615
1.143 0.1019 0.00528 0.5000 0.01182 0.255 NAA 1.143 0.1019 0.00528 0.5000 0.01182 0.255 N.540 2.037 0.1040 0.00528 0.5000 0.01182 0.255 7.540 1.143 0.1019 0.00528 0.57000 0.01181 0.429 8.040 2.207 0.1019 0.00528 0.57000 0.01181 0.429 8.040 1.144 0.1019 0.00528 0.57000 0.01181 0.429 8.040 1.104 0.1019 0.00539 0.5500 0.01176 0.429 8.040 1.104 0.1019 0.00539 0.5500 0.01175 0.425 8.040 1.104 0.1018 0.00539 0.5500 0.01175 0.455 7.540 0.008 0.1001 0.00589 0.00500 0.405 7.540 0.008 0.1001 0.00589 0.15100 0.00590 0.465 7.540 0.208 0.0054 0.00587 0.1650 0.00538 1 0.465 7.540 0.208 0.0054 0.00587 0.00538 1 0.465 7.540 0.208 0.0054 0.00587 0.00538 1 0.465 7.540 0.208 0.0054 0.00587 0.00538 1 0.465 7.540 0.208 0.0054 0.00587 0.00538 1 0.465 7.540 0.208 0.0004 0.00587 0.00538 1 0.465 7.540 0.208 0.0018 0.00589 0.00589 1 0.0059	1.143 0.1019 0.00526 0.5000 0.01182 0.255 NA 2.037 0.1049 0.00526 0.5000 0.01182 0.255 7.540 2.037 0.1049 0.00526 0.5000 0.01182 0.255 7.540 1.143 0.1019 0.02650 0.57000 0.01181 0.429 NA 1.143 0.1019 0.03628 0.57000 0.01181 0.429 0.040 2.907 0.1019 0.03628 0.57000 0.01181 0.429 0.040 2.907 0.1019 0.03628 0.57000 0.01181 0.429 0.040 2.402 0.1044 0.03628 0.57600 0.01181 0.429 0.040 1.104 0.1018 0.03629 0.56500 0.01183 0.465 7.540 0.808 0.1044 0.03679 0.4070 0.00225 0.465 7.540 0.00 1.119 0.1041 0.03679 0.4070 0.00240 0.465 <		1.486	0.1030	0.03600	0 67400	0.01314	0.312	95.	0.0033
1.143	1,149 0,1019 0,00578 0,5000 0,01162 0,255 7,540 2,037 0,1040 0,00578 0,5000 0,01162 0,255 7,540 1,143 0,1040 0,00578 0,5000 0,01161 0,255 7,540 2,207 0,1040 0,03628 0,5700 0,0161 0,429 NA 1,143 0,1019 0,03560 0,5700 0,0116 0,429 8,040 2,407 0,1018 0,03567 0,5600 0,01176 0,429 8,040 1,143 0,1019 0,03567 0,5600 0,01176 0,420 8,040 2,442 0,1019 0,03567 0,5600 0,01176 0,420 8,040 1,144 0,1018 0,03567 0,5600 0,01143 0,465 7,540 1,140 0,1018 0,33670 0,4070 0,00640 0,465 7,540 0,266 0,0004 0,0004 0,0004 0,465 0,465 7,540 <t< td=""><td>_</td><td></td><td></td><td>N.</td><td></td><td></td><td>0.355</td><td>3</td><td>0.1031</td></t<>	_			N.			0.355	3	0.1031
1.143 0.1019 0.03578 0.56000 0.01162 0.255 7.540 2.037 0.1040 0.03578 0.25600 0.01610 0.255 7.540 1.143 0.1019 0.03628 0.57600 0.01161 0.429 8.040 2.907 0.1019 0.03628 0.57600 0.01181 0.429 8.040 1.143 0.1019 0.03628 0.57600 0.01176 0.429 8.040 1.104 0.1019 0.03628 0.57600 0.01176 0.429 8.040 1.104 0.1019 0.03628 0.56500 0.01176 0.429 8.040 1.104 0.1019 0.03628 0.56500 0.01176 0.429 8.040 1.104 0.1018 0.03628 0.56500 0.01176 0.429 8.040 1.104 0.1018 0.03628 0.66500 0.01176 0.429 8.040 1.104 0.1018 0.03628 0.66500 0.01176 0.425 7.540 0.208 0.0004 0.03828 0.15100 0.00373 0.465 7.540 0.208 0.0004 0.03867 0.04000 0.00381 0.465 7.540 0.208 0.0004 0.03867 0.04000 0.00034 0.465 7.540 0.208 0.0004 0.03867 0.0400 0.00034 0.465 7.540 0.208 0.0004 0.03867 0.0400 0.00038 1 0.465 7.540 0.208 0.0004 0.03867 0.0400 0.00039 7.540	11143 0.1019 0.03578 0.56000 0.01162 0.255 7.540 2.037 0.1040 0.03578 0.93600 0.01610 0.255 7.540 1.143 0.1019 0.03629 0.67000 0.01161 0.429 NA 1.143 0.1019 0.03629 0.67000 0.01161 0.429 8.040 2.442 0.1019 0.03560 0.67000 0.01176 0.429 8.040 1.143 0.1019 0.03567 0.6500 0.01176 0.429 8.040 2.442 0.1019 0.03567 0.6500 0.01176 0.429 8.040 1.104 0.1018 0.03567 0.6500 0.01176 0.429 8.040 1.104 0.1018 0.03567 0.4070 0.0202 0.425 7.540 0.806 0.1018 0.03567 0.4050 0.00640 0.465 7.540 0.206 0.0064 0.0064 0.0064 0.0064 0.465 7.540				1260			0.284		35.5
2,037 0.1040 0.0357e 0.93600 0.01610 0.255 7.540 NA 1,260 0.0260 0.0161 0.226 7.540 1,143 0.1019 0.03560 0.5700 0.0161 0.429 8.040 2,207 0.1019 0.03560 0.5700 0.0116 0.429 8.040 1,143 0.1019 0.03560 0.5700 0.0206 0.447 NA 1,143 0.1019 0.03567 0.5700 0.0206 0.447 NA 1,144 0.1019 0.03567 0.5700 0.0116 0.420 8.040 2,442 0.1019 0.03567 0.5600 0.01143 0.420 8.040 1,104 0.1018 0.03667 0.5007 0.420 7.540 0.102 0.1031 0.03669 0.4010 0.0405 7.540 0.206 0.1041 0.0367 0.465 7.540 0.206 0.0004 0.0367 0.465 7.540	2.037 0.1040 0.0357e 0.93600 0.01610 0.255 7.540 1.143 0.1019 0.03569 0.67900 0.01161 0.426 1.84 2.907 0.1046 0.03569 0.67900 0.01161 0.429 8.040 2.907 0.1046 0.03569 0.67900 0.01161 0.429 8.040 2.907 0.1044 0.03569 0.67600 0.01149 0.429 8.040 1.143 0.1044 0.03567 0.65600 0.01143 0.429 8.040 1.144 0.1044 0.03567 0.56600 0.01143 0.429 8.040 1.144 0.1044 0.03567 0.4070 0.66500 0.420 8.040 1.144 0.1044 0.03569 0.03609 0.465 7.540 1.144 0.1044 0.03670 0.4070 0.00600 0.465 7.540 0.56 0.0060 0.1041 0.03670 0.1650 0.465 7.540 <	_	1.143	0.1010	0.03626	0.58000	0.01162	0.255	7 540	0.000
1.44	1.44		2.037	0.1040	0.03578	0.93600	0.01610	0.255	7.540	0.1254
1.143 0.1019 0.1250 0.5700 0.01161 0.2343 NA 2.507 0.10476 0.03526 0.57000 0.01161 0.429 8.040 2.507 0.10476 0.03526 0.57600 0.01176 0.429 8.040 1.443 0.1019 0.03567 0.05600 0.01176 0.420 8.040 1.104 0.1018 0.03567 0.56500 0.01143 0.420 8.040 1.104 0.1018 0.03567 0.56500 0.01143 0.465 7.540 1.640 0.1034 0.03567 0.40507 0.465 7.540 7.540 0.5004 0.1034 0.03567 0.40700 0.00600 0.465 7.540 0.5004 0.0004 0.03568 0.15100 0.00373 0.465 7.540 0.286 0.0004 0.03567 0.03568 0.00034 0.465 7.540 0.286 0.0004 0.03568 0.03568 0.465 7.540	1.143 0.1019 0.1250 0.57000 0.01161 0.429 NA 2.647 0.10476 0.03626 0.57000 0.01161 0.429 8.040 2.647 0.10476 0.03628 0.57600 0.01176 0.429 8.040 1.143 0.1019 0.03628 0.57600 0.01176 0.429 8.040 1.104 0.1044 0.03627 0.65600 0.01143 0.429 8.040 1.104 0.1034 0.03629 0.56600 0.01143 0.425 7.540 1.104 0.1034 0.03679 0.4070 0.00609 0.465 7.540 1.104 0.1034 0.03679 0.4070 0.00609 0.465 7.540 0.206 0.0004 0.03628 0.15100 0.00333 0.465 7.540 0.206 0.0004 0.03628 0.1500 0.00354 0.465 7.540 0.206 0.0004 0.03629 0.40100 0.00636 7.540 7.540				XX			0.420	NA.	1251
1,143	2.907 0.10476 0.03856 0.51900 0.01161 0.420 8.040 2.907 0.10476 0.03856 0.57800 0.01164 0.420 8.040 2.402 0.1019 0.03826 0.57800 0.01176 0.420 8.040 2.402 0.1019 0.03827 0.56500 0.01174 0.420 8.040 1.104 0.1018 0.03877 0.65600 0.01143 0.465 7.540 1.840 0.1034 0.03879 0.4050 0.00025 0.465 7.540 1.119 0.1001 0.03879 0.40700 0.00026 0.465 7.540 0.256 0.0004 0.03879 0.15100 0.00373 0.465 7.540 0.296 0.0004 0.03828 0.15100 0.00359 1 7.540 0.206 0.0004 0.03829 0.4650 0.465 7.540 0.206 0.0004 0.03829 0.40100 0.00059 7.540 0.0004		****	9	7,000			0.343	Y.	0.655
1.143 0.1019 0.03567 0.57600 0.01176 0.420 0.040 0.042 0.042 0.040 0.042	1.143		2000	0.000	070070	0.5/600	0.01161	0.429	8.040	0.0902
1.143 0.1019 0.03626 0.67600 0.01176 0.420 8.040 2.482 0.10144 0.03526 0.67600 0.01176 0.420 8.040 1.104 0.1018 0.03527 0.56600 0.01143 0.465 7.540 1.104 0.1018 0.03529 0.65600 0.01143 0.465 7.540 0.000 0.10363 0.03529 0.4050 0.02025 0.465 7.540 1.119 0.10182 0.03529 0.4050 0.0000 0.465 7.540 0.206 0.0004 0.03529 0.15100 0.00373 0.465 7.540 0.206 0.0004 0.03567 0.14500 0.00373 0.465 7.540 0.206 0.0004 0.03567 0.14500 0.00373 0.465 7.540 0.206 0.0004 0.03567 0.41600 0.00373 0.465 7.540 0.1001 0.03500 0.00039 0.0465 7.540	1.143 0.1019 0.03637 0.51600 0.01176 0.447 NA 2.482 0.1019 0.03637 0.56500 0.01176 0.420 0.040 1.104 0.1018 0.03567 0.05650 0.01143 0.465 7.540 1.104 0.1018 0.03565 0.465 7.540 0.465 7.540 0.808 0.1001 0.03567 0.40700 0.00500 0.465 7.540 0.206 0.10162 0.03628 0.15100 0.00500 0.465 7.540 0.206 0.0024 0.03628 0.15100 0.0033 0.465 7.540 0.206 0.0024 0.03629 0.15100 0.0033 0.465 7.540 0.206 0.0024 0.03629 0.14500 0.0034 0.465 7.540 0.206 0.0001 0.0024 0.03670 0.40100 0.00634 0.465 7.540 0.806 0.1018 0.0036 0.40100 0.00634 0.465			25.0	0.03500			0.420	070.0	0.1720
2.422 0.1014 0.03629 0.6660 0.01176 0.429 8.040 1.104 0.1014 0.03627 0.6660 0.01143 0.429 8.040 1.104 0.1014 0.03627 0.6660 0.01143 0.465 7.640 0.806 0.1001 0.03626 0.4070 0.02025 0.465 7.640 0.806 0.1001 0.03629 0.4070 0.00690 0.465 7.640 0.206 0.0004 0.03629 0.1510 0.0033 0.465 7.640 0.206 0.0004 0.03867 0.1460 0.0033 0.465 7.640 0.206 0.0004 0.03867 0.1460 0.0033 0.465 7.640 0.206 0.0004 0.03867 0.4100 0.00354 0.465 7.640 0.206 0.1001 0.0004 0.03867 0.4100 0.00359 0.465 7.640 0.104 0.1001 0.0007 0.0007 0.465 7.640 7	2.482 0.1016 0.0116 0.420 8.040 1.104 0.1018 0.03637 0.66600 0.01143 0.420 8.040 1.104 0.1018 0.03637 0.66600 0.01143 0.465 7.640 1.104 0.1034 0.03626 0.04070 0.00225 0.465 7.640 1.119 0.1011 0.03628 0.40700 0.00600 0.465 7.640 0.208 0.0004 0.03628 0.15100 0.00333 0.465 7.640 0.208 0.0604 0.03628 0.15100 0.00334 0.465 7.640 0.208 0.0604 0.03628 0.14600 0.00334 0.465 7.640 0.208 0.1011 0.03629 0.40100 0.00679 0.465 7.640 1.104 0.1018 0.03629 0.6460 0.00679 0.465 7.640 1.104 0.1018 0.03629 0.06679 0.465 7.640		1 143	01010	VA			0.447	NA.	1 200
1.104 0.1014 0.00262 0.00202 0.00207 0.420 6.040 0.00207 0.120 6.040 0.00207 0.1020 0.00202 0.1020 0.00202 0.1020 0.00202 0.1020 0.00202 0.1020 0.00202 0.1020 0.00202 0.1020 0.00202 0.1020 0.00202 0.1020 0.00202 0.1020 0.00202 0.1020 0.00202 0.1020 0.00202 0.1020 0.00202 0.1020 0.00202 0.1020 0.00202 0.1020 0.00202 0.1020 0.00202 0.1020	1.04		2.482	0 10444	0.03020	0.070.0	0.011/6	0.420	8.040	0.0000
1.119 0.100128 0.03052 0.405 7.540 0.0004 0.10014 0.03052 0.405 7.540 0.1001 0.03052 0.405 7.540 0.1001 0.03052 0.405 7.540 0.208 0.0004 0.03052 0.15100 0.00373 0.465 7.540 0.208 0.0004 0.03052 0.15100 0.00373 0.465 7.540 0.208 0.0004 0.03052 0.15100 0.00373 0.465 7.540 0.208 0.0004 0.03052 0.14500 0.00354 0.465 7.540 0.208 0.1001 0.03050 0.1450 0.0455 7.540 0.1104 0.1104 0.1104 0.1007	1840 0.1001 0.0002 0.0002 0.415 7.540 1.840 0.1001 0.0027 0.0002 0.415 7.540 1.119 0.1012 0.0027 0.4070 0.0000 0.455 7.540 1.119 0.10182 0.00328 0.15100 0.00040 0.455 7.540 0.206 0.0004 0.00328 0.15100 0.0031 0.455 7.540 0.206 0.0004 0.00328 0.14500 0.00358 0.455 7.540 0.206 0.001 0.00570 0.40100 0.00679 0.465 7.540 1.104 0.1018 0.03520 0.5400 0.01133 0.465 7.540 1.104 0.1018 0.03520 0.5400 0.01133 0.465 7.540 1.104 0.1018 0.03520 0.5400 0.01133 0.465 7.540 1.104 0.1018 0.03520 0.5400 0.01133 0.465 7.540 1.104 0.1018 0.03520 0.5400 0.01133 0.465 7.540 1.104 0.1018 0.03520 0.5400 0.01133 0.465 7.540 1.104 0.1018 0.03520 0.5400 0.01133 0.465 7.540 1.104 0.1018 0.03520 0.5400 0.01133 0.465 7.540 1.104 0.1018 0.03520 0.5400 0.01133 0.465 7.540 1.104 0.1018 0.03520 0.5400 0.01133 0.465 7.540 1.104 0.1018 0.03520 0.5400 0.01133 0.465 7.540 1.104 0.1018 0.03520 0.05400 0.01133 0.465 7.540 1.104 0.1018 0.03520 0.05400 0.01133 0.465 7.540 1.104 0.1018 0.03520 0.05400 0.00133 0.465 7.540 1.104 0.1018 0.03520 0.05400 0.00133 0.465 7.540 1.104 0.1018 0.03520 0.05400 0.00133 0.465 7.540 1.104 0.1018 0.03520 0.05400 0.00133 0.465 7.540 1.104 0.1018 0.03520 0.05400 0.00133 0.465 7.540 1.104 0.1018 0.03520 0.05400 0.00133 0.465 7.540 1.104 0.1018 0.03520 0.03520 0.03520 0.03520 0.03520 0.03520 1.104 0.1018 0.03520		101	0 1018	000000	000000	0.0207	0.420	0.040	0.1712
0.000 0.1001 0.0000 0.40700 0.00000 0.465 7.540 1.110 0.10102 0.00000 0.405 7.540 1.110 0.10102 0.00000 0.405 7.540 1.110 0.10102 0.00000 0.405 7.540 1.110 0.10102 0.00000 0.405 7.540 1.540 0.00000 0.00000 0.405 7.540 1.540 0.00000 0.00000 0.405 7.540 1.540 0.00000 0.00000 0.405 7.540 1.100 0.00000 0.00000 0.00000 0.405 7.540 1.100 0.1001 0.00000 0.00000 0.405 7.540 1.100 0.1001 0.00000 0.00000 0.405 7.540 1.100 0.1001 0.00000 0.00000 0.405 7.540 1.100 0.1001 0.00000 0.00000 0.405 7.540 1.100 0.1001 0.00000 0.00000 0.405 7.540 1.100 0.1001 0.00000 0.00000 0.405 7.540 1.100 0.1001 0.00000 0.00000 0.405 7.540 1.100 0.1001 0.00000 0.00000 0.405 7.540 1.100 0.1001 0.405 7.540 0.405 7.5	0 800 0 1001 0 03620 0 40700 0 00600 0 4455 7540 1.119 0 10162 0 03620 0 15100 0 00775 0 465 7540 0.206 0 0004 0 0304 0 0304 0 00373 0 465 7540 0.206 0 00240 0 03050 0 15100 0 00373 0 465 7540 0 206 0 00240 0 03670 0 40100 0 00354 0 465 7540 0 800 0 1001 0 03670 0 40100 0 00029 7540 7540 1 104 0 1018 0 03670 0 05460 0 01133 0 465 7540		1.640	0.10368	0.03695	0.00000	20000	6.465	2.540	0.0902
1.119 0.10182 0.00528 0.15100 0.00373 0.465 7.540 0.256 0.0528 0.0528 0.15100 0.00373 0.465 7.540 0.256 0.0528 0.0	1.119 0.10182 0.0328 0.15100 0.00373 0.465 7.540 0.236 0.0328 0.15100 0.00373 0.465 7.540 0.236 0.0328 0.0328 0.15100 0.00373 0.465 7.540 0.236 0.0604 0.0328 0.0328 0.1450 0.00374 0.465 7.540 0.236 0.0604 0.0328 0.040100 0.00354 0.465 7.540 0.40100 0.00679 0.465 7.540 0.40100 0.00679 0.465 7.540 0.40100 0.00679 0.465 7.540 0.40100 0.00133 0.465 7.540 0.40100 0.00133 0.465 7.540		0.800	0 1001	0.03620	00700	62020.0	0.465	2540	0.1567
0.296 0.0904 0.0328 0.15100 0.00373 0.465 7.540 0.296 0.0928 0.0928 0.15100 0.00373 0.465 7.540 0.296 0.0928 0.092	0.206 0.0004 0.0206 </td <td></td> <td>1.119</td> <td>0 10182</td> <td>0.03628</td> <td>200</td> <td>0.0000</td> <td>0.465</td> <td>24</td> <td>0.0712</td>		1.119	0 10182	0.03628	200	0.0000	0.465	24	0.0712
0.359 0.09286 0.0367 0.003375 0.465 7.540 0.0034 0.465 7.540 0.0038 0.00361 0.465 7.540 0.0038 0.0038 0.465 7.540 0.0038 0.0038 0.465 7.540 0.0038 0.	0.359 0.06268 0.0367 0.0034 0.465 7.540 0.0034 0.465 7.540 0.0208 0.00074 0.465 7.540 0.00074 0.00074 0.465 7.540 0.00074 0.00079 0.465 7.540 0.00079 0.00079 0.465 7.540 0.00079 0.00079 0.465 7.540 0.00079 0.00079 0.465 7.540 0.00079 0.00079 0.465 7.540 0.00079 0.00079 0.465 7.540 0.00079 0.00079 0.465 7.540 0.00079		0.296	0 0000	0.03028	0.15100	00000	0.465	3	0.1376
0.208 0.0004 0.03928 0.14500 0.00358 1 0.465 7.540 0.808 0.1001 0.03928 0.4010 0.00079 0.465 7.540	0.296 0.0904 0.03626 0.14500 0.00059 1 0.455 7.540 0.906 0.1001 0.03670 0.40100 0.00679 0.465 7.540 1.104 0.1018 0.03629 0.54600 0.01133 0.465 7.540		0.350	0.09286	0.03867		0.00634	0.465	2 5	0.0325
0.808 0.1001 0.09570 0.4010 0.00679 0.465 7.540	0.808 0.1001 0.09570 0.40100 0.00679 0.465 7.540 1.104 0.1018 0.09529 0.54500 0.01113 0.465 7.540		0.298	10000	0.03028	0.14500	0.00356	0.465	34.	0.0672
1.104 0 1018 0 00300 0 003000 0 00118	1.104 0.1016 0.03629 0.64600 0.01133 0.465 7.640		908.0	0.1001	0.03670	0.40100	0.00670	204.0	907	0.0314
	1647 CO-10110 CO-1011		1.104	0.1018	0.03620	000730	8/0000	0.460	240	0.0703

	1	21.1	etnt o	0.03626		90299	001161	921 0	000	Linno
			200	97.01.0		J. (2) 400	701100	3	200	*****
	#1 te	1001	0.1010	0.0000	•	OUT / I	110100	997.0	307	71717
	K149	27.7	0.101	97.77.70		DUCAG C	6,01155	6.239	019.2	1170 0
		911-1	Orot o	OUSEU O	•	261000	670100	215.0	014.2	7701 0
1111 1111	Kiği	1.143	0.1010	0.03028	•	201700	241100	217.0	25.0	
		1.101	1201.0	0.03622	•	0.00200	191100	110.0	1.640	0.0003
		1.143	Atot o	0.03020	•	0.00000	701177	1740	70	0 0000
			0.1010	0.03020	•	701/01	7150	707	900	21000
		1.143	377 3	0 03024	•	Descendance of	241100	70.0	700	9790 0
		511.	2010	979100		2010	101100	9000	900	2000
		71.7	200	9797979	•	3700	501110	95.0		60000
				92929		97770	77177	790	1000	6,0023
			100	60 0 asize		the said	201100	797.0	9000	00000
			9191 0	0.03528		b)tca	00114	100.0	9000	0 0021
		110	0.10	0.03020	•	SECULO S	200	195.3	000	90000
		5113	2707.0	0.00020	•	DUCCO (001130	2000.00	9 000	07,000
		717	6.1019	0.00020	3	Garred o	901100	101.0	G 500	60000
	Klus	1.113	9101 0	0.0000	•	10100	001133	Joe o	6 600	1100 m
	991X	1.143	2101.0	Density O	•	00000	001100	fnc o	d both	60000
		2111	21010	97.70.0	•	Danca.	*****	Jor o	no n	2122.0
1111 1111 1111		1142	21010	92000	,	Setup.	201100	Prot. O	700 7	tono s
1111 1111 1111		1113	21010	97,050	7	DANG!	0.01132	1900	9	91900
	••	1113	3101.0	97059	•	318	901100	797.0	700 0	1000
		21.1	71010	0.03020		10010	7000	Pr. o	760 0	*****
		112	21010	97900 0	.	2000	10110	707.0	900	2000
		1.113	31010	97000	.	37	37100	3	300	
		2	21212	97979 3		37.93		3		70000
		2	9171 0	97050 9		200	971100	2	200	
		777	2101.0	97.00.0		3	-			
		7	200	271170	•		171100		200	truit o
		71.	200	970000	•	00000	0.01122	797. 0	9000	0 1000
				0.07028	•	001100	0.01173	7	700 2	2000
		2 3	91919	0.00.00		101100	311100	700.0	2000	0.000
			3.3	979700	,	10/100	0/1100	196.9	900	01000
		7	0.1010	97000		DOM:	711100	fine a	2000	0.000
		2	0.11.0	0 03028	,	20100	4/1100		2000	\$100 A
		211	21010	D.W.C.C.O.	3	MALE O	911100	795.0	900 9	0.0004
		1.104	0.1010	879500	•			900	20.	e crime
none pren mine miles process and a mine process and		1 226	0.1022	019190	•	SUMPLY OF	201100	C 105	302	27779
nonn form million mill		970 9	1701.0	01000	•	DACKE I	toom o	6.403	347	-
n none ince alaine collen process and a section and a sect		979 1	1:01.0	191100	•	DUTTING .	79100	2	24	0.1228
none intendiction months of process and a control of process and a cont		0.250	1000	0.03620	•	3311	907.00	677-0	200	3773
non intermediate processor and a processor approcessor and a processor approcessor and a processor approcessor approcessor and a processor approcessor approcessor and a processor approcessor		2.631	9701 3	e usted	-	311	77100	3	3	9
noon into mining online pancon mining manage into a manage manage mining		97.0	1000	97.95.9		10000	330	2	34	2500
none for a state of process for a state of process of a state of a		0.000	1001 0	armen a	3	3717	2.00000	C. +CJ	24	00/20
noon for a stain a police process alors alors of process and process alors of process alors		101	0.101.0	RZOCO O	3	MICO.	901199	6.400	34	700.0
ones inca calles and assets alles of the collection of the calles of the		111	3101 3	97000 9	3	M170	730100	700.0	200	79/30
one for a fining apriles process state		271	21710	0.01020	3	20000	201100	100 0	200	90000
		?	2000	מלמנים מ	3	m/to	7/0100	Por o	000 0	91100

	1143	2000	0.03026	0.00100	101100	796.0	0 000	9000
901	,	9101 3	9791010	0.03100	0.01102	700.0		****
200	71	322	97000	90220	no to o	for a		0.0034
200	571	gint o	0.03026	20110	121100	Foc 9	900 9	P. LOUIS
100		71010	0.0000	OUCOU O	COLLOS) 30f	6.000	1000
707		21710	929500	00/00.0	911100	6.363	0 000	1200.0
704	9	9101.0	97,970 @	0 66200	601153	705.0		חיים ח
507	1.143	0 1010	9795.00	0 prote	0.01163	100.0		25000
206	27	3101.0	92959 9	0.00100	201100	100.0		9793 0
707	1.10	2101 0	pznenń	000190	921100	777.3		400
208	2	6.101.0	0.03620	0.0000	701100	for a		7790 0
208	643	0.1010	92959 0	00100	101100) int 0		300
210	1140	9101 0	97,95,0	BUNCO B	0.01140	0.361		9793
211	7	0.101.0	92.05.0.0	001030	991109	195.0		7033
212	2	O suit	0.02020	0.65800	911100	700.0		0 0050
213	7117	9:010	0.03624	0.00100	99110	777.0		1000
214	7	2121 3	0.03024	90000	71100	700.0		czona
916	61143	0.17.0	97,95,0 0	0 (6340)	20110.0	707.0		7:00:0
D	57.7	21010	97,000	mose o	J+1100	jar a		0700
~	1.143	3171.0	97,050 9	90000	201100	74.0		22000
***	7	01010	97,97,9 0	0 65000	\$110 B	775.0		97000
910		01010	07.00.0	DO 100	0.01173	300.0		21000
050		9101.0	92000	U DELUCIO	71100	100.0		9799 0
100	911	3.0.0	0 63670	00000	101100	195.0		crem a
		91010	97019	20100	001103	195.0		9797.9
		200.0	0.03024	U BOUND	71170	Joe o		4700 4
200	571	9101.0	D David	0.00100	291100	loc o		20000
225	3	01010	0.03026	90000	+61100	100.0		2000
CYZO	2	91010	97770 0	0.61000	0.01100	lot 0		97900
777	57.7	9101.0	6 U3028	002200	001100	0.400		1999
020	101	0.1021	220000	0 60200	0.01210	ent o		2
67.0	200	to to	0.000.0	Occur o	D. CUCCUS	C 400		7000
000	1.436	0501 0	90900	0.77000	377733	\$ TE O	30	
623	0.230	toma	92550.0	20130.7	****	C-100	3 2	27700
22.	2 633	300	97000	20100	97700	cor o		2000
6233	937.0	1000	97.97.0.0	0.202.0		200		0.000
Kan	4000	trot:o	20000	mett a	90000		7.7	96,000
K236	****	91717	97.00.0	977949	901100		700	£ 0000
6236	7	200	2200	3000	o deliber	797. 0	0000	5000
25	2		0700.00		92100	200	9009	ctono
2			th utwind	D COUNTY	591100	200.0	904 9	Tran a
200	2 9	grar o	0.05026	0 00000	991100	100.0	0000	11000
		9191 0	970500	O. CALIDAN	201100) int a	000	17000
		3101.0	97.00.0	0.00000	011170	Jine o	900	97970
		31010	0.000	OLUCO.O	41100	- 25	9000	07000
		21010	9797.00	0.0000	0.0110.0	700.0		9000
		91010	970700	00000	001101	700.0		97979
K248		3.0.0	92,00,00	90779 9	77170	D:00		
		3101	0.03020	S COUNT	24110.0	Jnr. a		7700.0
240		21010	97,950 0	0.0000	212100	Port a		2707.2
2 2 2	2 2	2101.0	6 6 3 5 2 6	002100	262100	0.301	9000	10000
							•	

6 000 6 000 145

100 S

01253

0.03628 0.03628

91919

===

7250 7251 7251 -

Brnh	From To	Тад	Conduct	Brnh	From To	Tag	Conduct	Brnh	From To	Tac	Conduct
1	1 2		.178E+01	57	17 301	1	.860E-01	113	32 176		.701E+00
2	1 145	4	.576E+00	58	17 301	1	.910E-01	114	32 301	1	.860E-01
3	2 3	i	.178E+01	59	18 19	1	.146E+01	115	32 301	1	.830E-01
4	2 146	4	.576E+00	60	18 162	4	.701E+00	116	33 34	ī	.146E+01
5	3 4	i	.178E+01	61	18 301	i	.860E-01	117	33 177	4	.701E+00
6	3 147	4	.576E+00	62	18 301	ī	.820E-01	118	33 301	i	.860E-01
. 7	4 5	1	.160E+01	63	19 20	ī	.146E+01	119	33 301	ī	.830E-01
8	4 148	4	.576E+00	64	19 163	4	.701E+00	120	34 35	ī	.146E+01
9	5 6	1	.146E+01	65	19 301	1	.870E-01	121	34 178	4	.701E+00
10	5 149	4	.701E+00	66	19 301	ī	.680E-01	122	34 301	ī	.860E-01
11	5 301	-	.954E-01	67	20 21	ī	.129E+01	123	34 301	ī	.830E-01
12	6 7	1	.146E+01	68	20 164	4	.701E+00	124	35 36	1	.146E+01
13		1		69	20 301	1	.870E-01	125	35 179	4	.701E+00
	6 150	4	.701E+00	70	20 301	1	.490E-01	126	35 301	1	.860E-01
14	6 301	1	.940E-01			1	.115E+01	127	35 301	1	.820E-01
15	7 8	1	.146E+01	71	21 22	4	.889E+00	128	36 37		.146E+01
16	7 151	4	.701E+00	72	21 165	-			36 180	1	
17	7 301	1	.920E-01	73	21 301	1	.940E-01	129			.701E+00
18	7 301	1	.240E-01	74	22 23	1	.115E+01	130	36 301	1	.860E-01
19	8 9	1	.146E+01	75	22 166	4	.889E+00	131	36 301	1	.810E-01
20	8 152	4	.701E+00	76	22 301	1	.770E-01	132	37 38	1	.146E+01
21	8 301	1	.910E-01	77	23 24	1	.115E+01	133	37 181	4	.701E+00
22	8 301	1	.490E-01	78	23 167	4	.889E+00	134	37 301	1	.850E-01
23	9 10	1	.146E+01	79	23 301	1	.420E-01	135	37 301	1	.800E-01
24	9 153	4	.701E+00	80	24 25	1	.115E+01	136	38 39	1	.146E+01
25	9 301	1	.890E-01	81	24 168	4	.889E+00	137	38 182	4	.701E+00
26	9 301	1	.680E-01	82	24 301	1	.136E+00	138	38 301	1	.850E-01
27	10 11	1	.146E+01	83	24 301	1	.220E-01	139	38 301	1	.780E-01
28	10 154	4	.701E+00	84	25 26	1	.115E+01	140	39 40	1	.146E+01
29	10 301	1	.880E-01	85	25 169	4	.889E+00	141	39 183	4	.701E+00
30	10 301	1	.820E-01	86	25 301	1	.117E+00	142	39 301	1	
31	11 12	1	.146E+01	87	25 301	1	.640E-01	143	39 301	1	.770E-01
32	11 155	4	.701E+00	88	26 27	1	.129E+01	144	40 41	1	.146E+01
33	11 301	1	.870E-01	89	26 170	4	.889E+00	145	40 184	4	
34	11 301	1	.910E-01	90	26 301	1	.101E+00	146	40 301	1	.850E-01
35	12 13	1	.146E+01	91	26 301	1	.850E-01	147	40 301	1	.750E-01
36	12 156	4	.701E+00	92	27 28	1	.146E+01	148	41 42	1	.146E+01
37	12 301	1	.860E-01	93	27 171	4	.701E+00	149	41 185	4	.701E+00
38	12 301	1	.970E-01	94	27 301	1	.890E-01	150	41 301	1	.850E-01
39	13 14	1	.146E+01	95	27 301	1	.810E-01	151	41 301	1	.730E-01
40	13 157	4	.701E+00	96	28 29	1	.146E+01	152	42 43 42 186		.129E+01 .701E+00
41	13 301	1	.850E-01	97	28 172	4	.701E+00	153 154		4	.850E-01
42	13 301	1	.100E+00	. 98	28 301	1	.880E-01				.710E-01
43	14 15	1	.146E+01	99	28 301	1	.810E-01	155		1	.115E+01
44	14 158	4	.701E+00	100	29 30	1	.146E+01	156	43 44 43 187		.889E+00
45	14 301	1	.850E-01	101	29 173	4	.701E+00	157		4	
46	14 301	1	.101E+00	102	29 301	1	.870E-01	158 159	43 301	1	.910E-01 .124E+00
47	15 16	1	.146E+01	103	29 301 30 31	1	.820E-01		44 45		.115E+01
48	15 159	4	.701E+00				.701E+00				.889E+00
49	15 301		.850E-01	105	30 174 30 301		.701E+00	161 162	44 188 44 301		.730E-01
50	15 301	1	.100E+00		30 301		.830E-01	163	44 301		.920E-01
51	16 17	1	.146E+01	107		1	.830E-01	164	44 301		.115E+01
52	16 160	4	.701E+00	108	31 32 31 175			165	45 46		.889E+00
53	16 301	1	.850E-01	109	31 1/5	4	.701E+00	166	45 189		.390E-01
54	16 301	1	.970E-01	110	31 301	1	.830E-01	167	46 47		.115E+01
55	17 18	1	.146E+01		32 .33	1			46 190		.889E+00
56	17 161	4	.701E+00	112	JZ ~JJ	1	* TAREAUT	1 100	40 130	4	.0072700

Brnh	From To	Tag	Conduct	Brnh	Fre	om To	Tac	Conduct	Brnh	Fre	om To	Tag	Conduct
169	46 301	1	.150E+00	225	60	301	1	.860E-01	281		301	1	.138E+00
170	46 301	1	.250E-01	226	60	301	1	.810E-01	282	74	301	1	.700E-01
171	47 48	1	.115E+01	227	61	62	1	.146E+01	283	75	76	1	.120E+01
172	47 191	4	.889E+00	228	61	205	4	.701E+00	284	75	219	4	.889E+00
173	47 301		.127E+00	229	61	301	1	.860E-01	285	75	301	1	.157E+00
174	47 301		.690E-01	230	61	301	ĩ	.810E-01	286	75	301	ī	.900E-01
175	48 49		.129E+01	231	62	63	ī	.146E+01	287	76	77	ī	.125E+01
176	48 192		.889E+00	232	62	206	4	.701E+00	288	76	220	4	
177	48 301		.100E+00	233	62	301	1	.860E-01	289	76	301	1	.655E+00
178	48 301		.890E-01	234	62	301	1	.810E-01					.171E+00
179	49 50		.146E+01		63				290	77	301	1	.980E-01
180	49 193			235		64	1	.146E+01	291		78	1	.210E+01
181		-	.701E+00	236	63	207	4	.701E+00	292	77	221	4	.655E+00
	49 301		.880E-01	237	63	301	1	.860E-01	293	77	301	1	.172E+00
182	49 301		.830E-01	238	63	301	1	.800E-01	294	77	301	1	.970E-01
183	50 51		.146E+01	239	64	65	1	.108E+01	295	78	79	1	.172E+01
184	50 194		.701E+00	240	64	208	4	.701E+00	296	78	222	4	.542E+00
185	50 301		.870E-01	241	64	301	1	.860E-01	297	78	301	1	.124E+00
186	50 301		.830E-01	242	64	301	1	.790E-01	298	78	301	1	.910E-01
187	51 52	1	.146E+01	243	65	66	1	.992E+00	299	79	80	1	.992E+00
188	51 195		.701E+00	244	65	209	4	.990E+00	300	79	223	4	.815E+00
189	51 301		.870E-01	245	65	301	1	.940E-01	301	79	301	1	.108E+00
190	51 301	1	.830E-01	246	65	301	1	.870E-01	302	79	301	1	.870E-01
191	52 53	1	.146E+01	247	66	67	1	.172E+01	303	80	.81	1	.108E+01
192	52 196	4	.701E+00	248	66	210	4	.815E+00	304	80	224	4	.990E+00
193	52 301	1	.870E-01	249	66	301	1	.930E-01	305	80	301	1	.930E-01
194	52 301	1	.830E-01	250	66	301	1	.103E+00	306	80	301	1	.910E-01
195	53 54	1	.146E+01	251	67	68	1	.210E+01	307	81	82	1	.146E+01
196	53 197	4	.701E+00	252	67	211	4	.542E+00	308	81	225	4	.701E+00
197	53 301	1	.870E-01	253	67	301	1	.930E-01	309	81	301	1	.840E-01
198	53 301	1	.830E-01	254	67	301	1	.125E+00	310	81	301	1	.830E-01
199	54 55	1	.146E+01	255	68	69	1	.125E+01	311	82	83	1	.146E+01
200	54 198	4	.701E+00	256	68	212	4	.655E+00	312	82	226	4	.701E+00
201	54 301	1	.870E-01	257	68	301	1	.990E-01	313	82	301	1	.850E-01
202	54 301	1	.830E-01	258	68	301	1	.172E+00	314	82	301	1	.820E-01
203	55 56	1	.146E+01	259	69	70	1	.120E+01	315	83	84	1	.146E+01
204	55 199	4	.701E+00	260	69		4	.655E+00	316	83	227	4	.701E+00
205	55 301	1	.870E-01	261	69	301	1	.990E-01	317	83	301	1	.850E-01
206	55 301	1	.830E-01	262	69	301	1	.171E+00	318	83	301	1	.820E-01
207	56 57	1	.146E+01	263	70	71	1	.115E+01	319	84	85	1	.146E+01
208	56 200	4	.701E+00	264	70		.4	.889E+00	320	84	228	4	.701E+00
209	56 301	1	.870E-01	265	70		1	.900E-01	321	84	301	1	.860E-01
210	56 301	1	.820E-01	266		301	ī	.157E+00	322	84	301	ī	.820E-01
211	57 58	ī	.146E+01	267	71	72	ī	.115E+01	323	85	86	ī	.146E+01
212	57 201	4	.701E+00	268	71		4	.889E+00	324	85	229	4	.701E+00
213	57 301	i	.860E-01	269	71		1	.710E-01	325	85	301	1	.860E-01
214	57 301	ī	.820E-01	270	71		ī	.138E+00	326	85	301	1	.820E-01
215	58 59	ī	.146E+01	271	72		ī	.115E+01	327	86	87	ī	.146E+01
216	58 202		.701E+00	272		216	4	.889E+00	328		230		.701E+00
217	58 301	1	.860E-01	273		301	1	.330E-01	329		301	1	.860E-01
218	58 301	ī	.820E-01	274	72		ī	.670E-01	330		301	1	.820E-01
219	59 60	i	.146E+01	275	73		1	.115E+01	331	87	88	1	.146E+01
220	59 203	4	.701E+00	275	73		4	.889E+00	332	87		4	.701E+00
		_	.860E-01				-					-	
221 222	59 301 59 301	1		277	73		1	.670E-01	333	87		1	.860E-01
222		1	.820E-01	278	73		1	.115E+01	334	87		1	.820E-01
		1	.146E+01	279	74		1		335	88	89	1	.146E+01
224	60 204	4	.701E+00	280	/4	218	4	.8895+00	336	ಕಕ	232	4	.701E+00

```
Brnh From To Tag Conduct
                            Brnh From To Tag Conduct
Brnh From To Tag Conduct
               1 .850E-01
                            393 102 301
                                                        449 116 301
                                                                       1 .830E-01
                                           1 .900E-01
337
     88 301
                                                        450 117 118
                                           1 .146E+01
                                                                       1 .146E+01
338
     88
        301
               1 .820E-01
                            394 103 104
                                           4 .701E+00
                                                        451 117 261
                                                                       4 .701E+00
               1 .146E+01
                            395 103 247
339
     89
         90
                                           1 .760E-01
                                                        452 117 301
                                                                       1 .830E-01
340
     89 233
               4 .701E+00
                            396 103 301
               1 .850E-01
                            397 103
                                    301
                                           1 .840E-01
                                                        453 117
                                                                301
                                                                       1 .830E-01
341
     89 301
                                           1 .146E+01
                                                        454 118 119
                                                                       1 .129E+01
        301
               1 .810E-01
                            398 104
                                    105
342
     89
               1 .146E+01
                            399 104 248
                                           4 .701E+00
                                                        455 118 262
                                                                       4 .701E+00
343
     90
         91
                                                                       1 .820E-01
                                           1 .780E-01
                                                        456 118 301
               4 .701E+00
                            400 104
                                    301
344
     90 234
     90 301
               1 .850E-01
                            401 104
                                    301
                                           1 .840E-01
                                                        457 118
                                                                301
                                                                       1 .840E-01
345
                                           1 .146E+01
                                                        458 119 120
                                                                       1 .115E+01
        301
               1 .810E-01
                            402 105
                                    106
346
     90
                                           4 .701E+00
                                                        459 119 263
                                                                       4 .889E+00
               1 .146E+01
                            403 105 249
347
     91
         92
                                           1 .790E-01
                                                        460 119
                                                                301
                                                                       1 .860E-01
     91 235
               4 .701E+00
                            404 105 301
348
                                                                       1 .960E-01
                 .850E-01
                                           1 .830E-01
                                                        461 119
                                                                301
     91 301
                            405
                                105
                                    301
349
               1
                                           1 .146E+01
                                                                       1 .115E+01
                                                        462 120 121
                                106 107
350
        301
               1 .810E-01
                            406
     91
                                                                       4 .889E+00
               1 .146E+01
                                    250
                                           4 .701E+00
                                                        463 120 264
351
     92
         93
                            407
                                106
                                           1 .810E-01
                                                                       1 .650E-01
                                    301
                                                        464 120
                                                                301
                            408 106
352
     92 236
               4 .701E+00
                                                                       1 .113E+00
                                           1 .830E-01
                                                        465 120 301
                                    301
353
     92
        301
               1 .850E-01
                            409
                                106
                                           1 .146E+01
                                                                       1 .115E+01
                            410 107 108
                                                        466 121 122
354
     92 301
               1 .810E-01
                                                                       4 .889E+00
                                           4 .701E+00
                                                        467 121 265
                            411 107 251
355
     93
         94
               1 .146E+01
                                           1 .820E-01
                            412 107
                                     301
                                                        468 121 301
                                                                       1 .220E-01
     93 237
               4 .701E+00
356
                                           1 .830E-01
                                                                       1 .133E+00
                                                        469 121 301
               1 .850E-01
                            413
                                107
                                     301
357
     93
        301
                                           1 .146E+01
               1 .810E-01
                                                        470 122 123
                                                                       1 .115E+01
                            414 108
                                    109
358
     93 301
                                           4 .701E+00
                                                        471 122 266
                                                                       4 .889E+00
         95
               1 .146E+01
                            415 108
                                     252
359
     94
                                                                       1 .420E-01
               4 .701E+00
                                                        472 122 301
                                           1 .840E-01
                            416 108
                                     301
360
     94 238
                                                                       1 .115E+01
                                           1 .830E-01
                                                        473 123 124
                                108 301
     94
        301
               1 .850E-01
                            417
361
                                                                       4 .889E+00
                                           1 .146E+01
                                                        474 123 267
               1 .810E-01
                            418 109
                                    110
     94 301
362
                                           4 .701E+00
                                                        475 123 301
                                                                       1 .760E-01
                            419 109
                                     253
363
     95
         96
               1 .146E+01
                                                                       1 .129E+01
                                           1 .850E-01
                                                        476 124 125
                            420 109
                                     301
     95 239
               4 .701E+00
364
                                                                       4 .889E+00
                                           1 .830E-01
                                                        477 124 268
                            421 109
                                    301
365
     95
        301
               1
                 .850E-01
                                                                       1 .940E-01
                                           1 .146E+01
                                                        478 124 301
               1 .810E-01
                            422 110 111
366
     95 301
                            423 110 254
                                           4 .701E+00
                                                        479 125 126
                                                                       1 .146E+01
               1 .129E+01
367
     96
         97
                                           1 .850E-01
                                                                       4 .701E+00
                                                        480 125 269
368
     96 240
                 .701E+00
                            424 110
                                     301
                                                                       1 .490E-01
                                           1 .830E-01
                                                        481 125 301
               1 .840E-01
                            425 110 301
369
     96 301
                                           1 .146E+01
                                                                       1 .860E-01
                                                        482 125 301
               1 .800E-01
                            426 111 112
370
      96 301
                                                                       1 .146E+01
               1 .115E+01
                            427 111 255
                                                        483 126 127
                                           4 .701E+00
371
      97
         98
                                           1 .850E-01
                                                                       4 .701E+00
                                                        484 126 270
                            428 111 301
372
      97
         241
                 .889E+00
                                                                       1 .680E-01
                            429 111 301
                                           1 .830E-01
                                                        485 126 301
373
      97
         301
               1 .900E-01
                                                                       1 .860E-01
                                           1 .146E+01
                                                        486 126 301
               1 .930E-01
                            430 112 113
374
      97
         301
                                                                       1 .146E+01
                                            4 .701E+00
                                                        487 127 128
               1 .115E+01
                             431 112
                                     256
375
      98
          99
                                                                       4 .701E+00
               4 .889E+00
                                            1 .850E-01
                                                        488 127 271
                            432 112
                                     301
376
      98 242
                                           1 .830E-01
                                                                       1 .820E-01
                                                         489 127
                                                                 301
377
         301
               1 .690E-01
                             433 112 301
      98
                                                                       1 .850E-01
                                                         490 127 301
               1 .123E+00
                                            1 .146E+01
                             434 113
                                     114
         301
378
      98
                                            4 .701E+00
                                                                       1 .146E+01
                                                         491 128 129
                             435 113
                                     257
379
      99
         100
               1
                 .115E+01
                                                                        4 .701E+00
                                            1 .850E-01
                                                         492 128 272
                             436 113 301
380
      99
        243
                 .889E+00
                                                                       1 .910E-01
                             437 113 301
                                            1 .830E-01
                                                         493 128 301
                 .260E-01
381
      99 301
               1
                                                                       1 .840E-01
                                            1 .146E+01
                                                         494 128 301
               1 .149E+00
                             438 114
                                     115
382
      99
         301
                                                                        1 .146E+01
                                             .701E+00
                                                         495 129 130
                             439 114 258
                1 .115E+01
     100 101
383
                                                                        4 .701E+00
                                            1 .850E-01
                                                         496 129
                                                                 273
                             440 114 301
384
     100 244
                 .889E+00
                                                                        1 .970E-01
                1 .380E-01
                                            1 .830E-01
                                                         497 129 301
                             441 114
                                     301
385
     100 301
                                            1 .146E+01
                                                                        1 .830E-01
                                                         498 129 301
                             442 115 116
386
     101
         102
                1 .115E+01
                                                                        1 .146E+01
                4 .889E+00
                             443 115 259
                                            4 .701E+00
                                                         499 130 131
     101 245
387
                                                         500 130 274
                                                                        4 .701E+00
                             444 115 301
                                            1 .840E-01
                 .920E-01
 388 101 301
                                                                        1 .100E+00
                                            1 .830E-01
                                                         501 130 301
     101 301
                1 .720E-01
                             445 115
                                     301
 389
                                                                        1 .830E-01
                                            1 .146E+01
                                                         502 130 301
                             446 116 117
                1 .129E+01
 390 102 103
                                            4 .701E+00
                                                                        1 .146E+01
                                                         503 131 132
                4 .889E+00
 391 102 246
                             447 116 260
                                                                        4 .701E+00
                                                         504 131 275
                1 .124E+00
                             448 116 301
                                            1 .840E-01
 392 102 301
```

Brnh From Mo	Mag Conduct!	Brnh From To	Tag :Conduct	Prob From To	Tag Candust
Brnh From To 505 131 301	1 .101E+00		5 .174E+03	Brnh From To 617 214 213	
	1 .830E-01	561 158 157			
506 131 301		562 159 158		618 215 214	5 .174E+03
507 132 133	1 .146E+01	563 160 159	5 .174E+03	619 216 215	5 .174E+03
508 132 276	4 .701E+00	564 161 160	5 .174E+03	620 217 216	5 .174E+03
509 132 301	1 .100E+00	565 162 161	5 .174E+03	621 218 217	5 .174E+03
510 132 301	1 .830E-01	566 163 162	5 .174E+03	622 219 218	5 .174E+03
511 133 134	1 .146E+01	567 164 163	5 .174E+03	623 220 219	5 .174E+03
512 133 277	4 .701E+00	568 165 164	5 .174E+03	624 221 220	5 .174E+03
513 133 301	1 .970E-01	569 166 165	5 .174E+03	625 222 221	5 .174E+03
514 133 301	1 .830E-01	570 167 166	5 .174E+03	626 223 222	5 .174E+03
515 134 135	1 .146E+01	571 168 167	5 .174E+03	627 224 223	5 .174E+03
516 134 278	4 .701E+00	572 169 168	5 .174E+03	628 225 224	5 .174E+03
517 134 301	1 .910E-01	573 170 169	5 .174E+03	629 226 225	5 .174E+03
518 134 301	1 .840E-01	574 171 170	5 .174E+03	630 227 226	5 .174E+03
519 135 136	1 .146E+01	575 172 171	5 .174E+03	631 228 227	5 .174E+03
520 135 279	4 .701E+00	576 173 172	5 .174E+03	632 229 228	5 .174E+03
521 135 301	1 .820E-01	577 174 173	5 .174E+03	633 230 229	5 .174E+03
522 135 301	1 .840E-01	578 175 174	5 .174E+03	634 231 230	5 .174E+03
523 136 137	1 .146E+01	579 176 175	5 .174E+03	635 232 231	5 .174E+03
524 136 280	4 .701E+00	580 177 176	5 .174E+03	636 233 232	5 .174E+03
525 136 301	1 .680E-01	581 178 177	5 .174E+03	637 234 233	5 .174E+03
526 136 301	1 .860E-01	582 179 178	5 .174E+03	638 235 234	5 .174E+03
527 137 138	1 .146E+01	583 180 179	5 .174E+03	639 236 235	5 .174E+03
528 137 281	4 .701E+00	584 181 180	5 .174E+03	640 237 236	5 .174E+03
529 137 301	1 .490E-01	585 182 181	5 .174E+03	641 238 237	5 .174E+03
530 137 301	1 .870E-01	586 183 182	5 .174E+03	642 239 238	5 .174E+03
531 138 139	1 .146E+01	587 184 183	5 .174E+03	643 240 239	5 .174E+03
532 138 282	4 .701E+00	588 185 184	5 .174E+03	644 241 240	5 .174E+03
533 138 301	1 .240E-01	589 186 185	5 .174E+03	645 242 241	5 .174E+03
534 138 301	1 .880E-01	590 187 186	5 .174E+03	646 243 242	5 .174E+03
535 139 140	1 .146E+01	591 188 187	5 .174E+03	647 244 243	5 .174E+03
536 139 283	4 .701E+00	592 189 188	5 .174E+03	648 245 244	5 .174E+03
537 139 301	1 .900E-01	593 190 189	5 .174E+03	649 246 245	5 .174E+03
538 140 141	1 .160E+01	594 191 190	5 .174E+03	650 247 246	5 .174E+03
539 140 141	4 .701E+00	595 192 191	5 .174E+03	651 248 247	5 .174E+03
540 140 301	1 .910E-01	596 193 192	5 .174E+03	652 249 248	5 .174E+03
541 141 142	1 .178E+01	597 194 193	5 .174E+03	653 250 249	5 .174E+03
		598 195 194	5 .174E+03	654 251 250	5 .174E+03
542 141 285	4 .576E+00			655 252 251	
543 142 143	1 .178E+01	599 196 195 600 197 196	5 .174E+03	656 253 252	5 .174E+03 5 .174E+03
544 142 286	4 .576E+00	601 198 197	5 .174E+03	657 254 253	5 .174E+03
545 143 144 546 143 287	1 .178E+01			658 255 254	5 .174E+03
	4 .576E+00	602 199 198		659 256 255	5 .174E+03
547 144 288	4 .576E+00				5 .1/4E+03
548 145 302	5 .174E+03	i e		660 257 256 661 258 257	5 .174E+03
549 146 145	5 .174E+03	605 202 201	5 .174E+03		1
550 147 146	5 .174E+03	1	5 .174E+03	662 259 258	5 .174E+03
551 148 147	5 .174E+03	1	5 .174E+03	663 260 259	5 .174E+03
552 149 148	5 .174E+03	608 205 204	5 .174E+03	664 261 260	5 .174E+03
553 150 149	5 .174E+03		5 .174E+03	665 262 261	5 .174E+03
554 151 150	5 .174E+03		5 .174E+03	666 263 262	5 .174E+03
555 152 151	5 .174E+03	1	5 .174E+03	667 264 263	5 .174E+03
556 153 152	5 .174E+03		5 .174E+03	668 265 264	5 .174E+03
557 154 153	5 .174E+03		5 .174E+03	669 266 265	5 .174E+03
558 155 154	5 .174E+03		5 .174E+03	670 267 266	5 .174E+03
559 156 155	5 .174E+03		5 .174E+03	671 268 267	5 .174E+03
560 157 156	5 .174E+03	616 213 212	5 .174E+03	672 269 268	5 .174E+03

```
Brnh From To Tag Conduct
673 270 269
674 271 270
675 272 271
                 5 .174E+03
                   5 .174E+03
5 .174E+03
                  5 .174E+03
676 273 272
677 274 273
                  5 .174E+03
                  5 .174E+03
5 .174E+03
678 275 274
679 276 275
680 277 276
                   5 .174E+03
681 278 277
                  5 .174E+03
                  5 .174E+03
5 .174E+03
682 279 278
683 280 279
                  5 .174E+03
684 281 280
685 282 281
686 283 282
                  5 .174E+03
5 .174E+03
687 284 283
                   5 .174E+03
688 285 284
                  5 .174E+03
689 286 285
690 287 286
                  5 .174E+03
5 .174E+03
691 288 287
                   5 .174E+03
```

APPENDIX E. TASS NODAL TEMPERATURE OUTPUT

The following output summarizes the Steady State Thermal Analyzer output for the mass flow rates considered in this analysis.

TALSR(METRIC) -- RUN 1. SIMPLE MODEL. MASS FLOW 149.7 kg/hr (330 lbm/hr) Temperatures, degC 1 25.19 2 25.26 3 25.40 4 25.67 5 26.22 6 26.60 7 26.97 8 27.31 9 27.60 10 27.81 11 27.97 12 28.07 13 28.13 14 28.16 15 28.15 16 28.10 17 28.01 18 27.87 19 27.65 20 27.33 21 26.85 22 26.58 23 26.55 24 27.19 25 27.56 26 27.76 27 27.95 28 28.03 29 28.08 30 28.10 31 28.12 32 28.13 33 28.14 34 28.15 35 28.16 36 28.17 37 28.18 38 28.19 39 28.19 40 28.19 41 28.17 42 28.12 43 27.99 44 27.61 45 27.15 46 27.66 47 27.93 48 28.05 49 28.19 50 28.25 51 28.29 52 28.31 53 28.32 54 28.34 55 28.35 56 28.36 57 28.37 58 28.37 59 28.38 60 28.39 61 28.40 62 28.40 63 28.41 64 28.40 65 28.37 66 28.84 67 29.28 68 29.43 69 29.36 70 28.87 71 28.39 72 27.84 73 27.85 74 28.42 75 28.92 76 29.43 77 29.53 78 29.39 79 28.97 80 28.53 81 28.58 82 28.61 83 28.62 84 28.64 85 28.65 86 28.66 87 28.67 88 28.67 89 28.68 90 28.69 91 28.70 92 28.71 93 28.71 94 28.71 95 28.69 96 28.64 97 28.53 98 28.43 99 28.19 100 27.73 101 28.18 102 28.57 103 28.71 104 28.77 105 28.80 106 28.82 107 28.84 108 28.85 28.86 110 109 28.87 111 28.88 112 28.88 113 28.89 114 28.90 115 28.90 116 28.89 117 28.87 118 28.81 119 28.65 120 28.48 121 28.15 122 27.57 123 27.61 124 27.88 125 28.34 126 28.64 127 28.86 128 29.01 129 29.11 130 29.17 131 29.20 132 29.19 133 29.15 134 29.07 135 28.95 136 28.77 137 28.53 138 28.23 139 27.91 140 27.57 141 27.09 142 26.84 143 26.72 144 26.66 145 25.00 146 25.00 147 25.00 148 25.00 149 25.01 150 25.02 151 25.02 152 25.03 153 25.05 155 25.04 154 25.07 156 25.08 157 25.09 158 25.10 159 25.12 160 25.13 161 25.14 162 25.15 163 25.16 164 25.17 165 25.18 166 25.18 167 25.19 168 25.20 169 25.21 170 25.23 171 25.24 172 25.25 173 25.26 174 25.27 175 25.28 176 25.29 177 25.31 178 25.32 179 25.33 180 25.34 181 25.35 182 25.36 183 25.37 184 25.39 185 25.40 186 25.41 187 25.42 188 25.43 189 25.44 190 25.45 191 25.46 192 25.48 193 25.49 194 25.50 195 25.51 196 25.52 197 25.53 198 25.54 25.57 201 199 25.56 200 25.58 202 25.59 203 25.60 204 25.61 205 25.62 206 25.63 207 25.65 208 25.66 209 25.67 210 25.69 211 25.70 212 25.71 213 25.73 214 25.74 215 25.75 216 25.77 217 25.78 218 25.79 219 25.81 220 25.82 221 25.83 222 25.84 223 25.86 224 25.87 225 25.88 226 25.90 227 25.91 228 25.92 25.93 230 229 25.94 231 25.95 232 25.96 233 25.97 234 25.98 235 25.99 236 26.00 237 26.02 238 26.03 239 26.04 240 26.05 241 26.06 242 26.07 243 26.08 244 26.09 245 26.10 246 26.11 247 26.12 248 26.14 249 26.15 250 26.16 251 26.17 252 26.18 253 26.19 254 26.20 255 26.21 256 26.22 257 26.23 258 26.24 259 26.25 260 26.26 261 26.27 262 26.28 263 26.30 264 26.31 265 26.32 266 26.32 267 26.33 268 26.34 269 26.35 270 26.36 271 26.37 272 26.38 273 26.39 274 26.40 275 26.41 276 26.42 277 26.43 278 26.44 279 26.45 280 26.46 281 26.47 282 26.48 283 26.48 284 26.49 285 26.49 286 26.49 287 26.49 288 26.49 301 40.00 302 25.00

			2. COM	PLEX M	odel, mas	s flow	149.7	kg/hr	(330 lb	m/hr)	
•	atures,	-	25 24		25 44		25 24	-	26 22	_	06 70
1	25.21	2	25.20		25.44	4	25.74	5	26.33	6	26.73
7	27.09	8	27.4		27.68	10	27.87	11	28.01	12	28.10
13	28.16	14	28.18		28.17	16	28.13	17	28.04	18	27.90
19	27.69	20	27.39		26.91	22	26.65	23	26.62	24	27.20
25	27.56	26	27.78		27.98	28	28.06	29	28.10	30	28.13
31	28.15	32	28.1		28.16	34	28.16	35	28.16	36	28.16
37	28.14	38	28.13		28.11	40	28.09	41	28.07	42	28.03
43	27.97	44	27.6		27.18	46	27.65	47	27.93	48	28.07
49	28.22	50	28.28		28.32	52	28.34	53	28.35	54	28.36
55	28.37	56	28.3		28.37	58	28.38	59	28.38	60	28.39
61	28.39	62	28.39		28.38	64	28.37	65	28.32	66	28.79
67	29.24	68	29.43	69	29.35	70	28.87	71	28.39	72	27.85
73	27.85	74	28.4	75	28.91	76	29.41	77	29.49	78	29.34
79	28.91	80	28.5	81	28.57	82	28.60	83	28.62	84	28.63
85	28.65	86	28.6	87	28.66	88	28.66	89	28.66	90	28.67
91	28.68	92	28.6	93	28.68	94	28.68	95	28.66	96	28.60
97	28.49	98	28.40	99	28.16	100	27.74	101	28.18	102	28.55
103	28.65	104	28.7	105	28.74	106	28.77	107	28.80	108	28.83
109	28.85			5 111	28.87		28.88	113	28.89	114	28.89
115	28.89			7 117	28.84		28.78	119	28.62	120	28.44
121	28.13		27.6	123	27.67		27.93		28.37		28.67
127	28.87		29.0	129	29.11	130	29.16		29.19		29.18
133	29.15			135	28.96		28.80		28.57		28.29
139	27.97			3 141	27.12		26.86		26.73		26.67
145	25.00			147	25.00		25.01		25.01		25.02
151	25.00			153	25.05		25.06		25.07		25.08
157	25.09			159	25.12		25.13		25.14		25.15
	25.16		25.1	7 165	25.18		25.19		25.20		25.21
163	25.22	-	25.1	3 171	25.24		25.25		25.27		25.28
169				177	25.31		25.32		25.33		25.35
175	25.29			7 183	25.38		25.39		25.40		25.41
181	25.36			189	25.44		25.46		25.47		25.48
187	25.42			195	25.51		25.53		25.54		25.55
193	25.49				25.58		25.59		25.60		25.62
199	25.56			7 201	25.65		25.66		25.68		25.69
205	25.63			4 207	25.73		25.74		25.76		25.77
211	25.70			1 213			25.82	221	25.84		25.85
217	25.78			9 219	25.81		25.90		25.91	224	25.92
223	25.86			8 225	25.89				25.97	224	25.98
229	25.93			4 231	25.95		25.96				26.05
235	26.00			1 237	26.02		26.03		26.04		26.11
241	26.06			7 243	26.08		26.09		26.10	440	
247	26.12		26.1	4 249	26.15		26.16		26.17		26.18
253	26.19			0 255	26.21		26.22		26.23		26.24
259	26.25			6 261	26.27	262	26.28		26.30		26.31
265	26.32		26.3	2 267	26.33	268	26.34		26.35		26.35
271	26.36	272	26.3	8 273	26.39		26.40		26.41		26.42
277	26.43	278	26.4	4 279	26.45	280	26.46		26.47		26.48
283	26.48	284		9 285	26;49	286	26.49	287	26.49	288	26.49
301	40.00		25.0	0							
_											

TALSR((ETRIC)	RUN	3. COMPL	EX M	ODEL,	MAS	S FLOW	OF	68	kg/hr	(150	lbm/hr)	
Tempera	atures, d	egC											
1	25.69	2	25.81	3	26.	07	4	26.	51	5	27.2	8 6	27.87
7	28.41	8	28.88	9	29.	. 26	10	29.	55	11	29.7	6 12	29.89
13		14	30.01	15	30.	.00	16	29.	93	17	29.8	11 18	29.62
19		20	28.95	21	28.	39	22	28.	07	23	28.0	6 24	28.71
25		26	29.50	27	29.	.75	28	29.	88	29	29.9	6 30	30.01
31		32	30.06	33	30.	.07	34	30.	08	35	30.0	8 36	30.07
37		38	30.04	39	30.		40		99	41	29.9		29.88
43		44	29.40	45		96	46	29.		47	29.7		29.96
49		50	30.25	51		31	52	30.		53	30.3		30.39
55		56	30.41	57		42	58	30.		59	30.4		30.44
		62	30.45	63		46	64	30.		65	30.4		30.97
61			31.59	69		51	70	31.		71	30.5		29.94
67		68		75		.09	76		60	77	31.7		31.56
73		74	30.54	_			82		78		30.8		30.81
79		80	30.73	81		. 76					30.8		30.87
85		86	30.84	87		.85	88		86				30.77
91		92	30.88	93		.88	94		87		30.8		
97		98		99			100			101		29 102	30.68
103	30.83 1		30.92				106			107		7 108	31.10 31.19
109	31.13 1		31.15				112			113		19 114	
115	31.18 1		31.16				118			119		33 120	30.59
121	30.22 1		29.69				124			125		3 126	30.88
127	31.14 1	.28	31.33				130	31.	.53	131	31.5	6 132	31.56
133	31.51 1		31.41				136	31.	.04	131 137 143	30.7	74 138	30.37 28.24
139	29.94 1		29.48				142				28	33 144	
145	25.00 1		25.01				148			149		3 150	25.04
151	25.06 1		25.07				154			155		14 156	25.16
157	25.18 1		25.20				160			161		27 162	25.29
163	25.31 1		25.33				166			167		38 168	25.40
169	25.42 1		25.44				172			173		51 174	25.53
175	25.55 1		25.57				178			179		53 180	25.65 25.77
181	25.67 1		25.69				184			185		75 186	
187	25.80 1		25.82				190			191		38 192	25.91
193	25.93 1		25.95				196			197		198	26.03
199	26.05 2		26.07		26		202			203		13 204	26.15
205	26.17 2		26.19				208			209		26 210	26.28 26.42
211	26.30 2		26.33		26	. 35	214			215	26.	40 216	
217	26.44 2	218	26.47				220			221		54 222	26.56
223	26.58 2	224	26.61				226	26	. 65	227		67 228	26.69
229	26.71 2	230	26.73	231			232			233		79 234	26.80
23 5	26.82 2	236	26.84	237	26		238			239		90 240	26.92
241	26.94	242	26.96	243	26		244			245		02 246	27.04
247	27.06 2	248	27.07				250			251		13 252	27.15
253	27.17	254	27.19				256			257		24 258	27.26
259	27.28	260	27.30				262			263		35 264	27.37
265	27.39	266	27.40				268	27	.43	269		45 270	27.46
271	27.48	272	27.50		27		274			275		55 276	27.57
277	27.59	278	27.61		27	. 63	280 286	27		281		66 282	27.67
283	27.68		27.69	285	27	.69	286	27	.70	287	27.	70 288	27.70
301	40.00	302	25.00										_
													-

TALSR(METRIC) -	-RUN	4. COMI	PLEX	MODEL,	MASS	FLOW	OF	272	. 2	kg/hr	(60	lbm	n/hr)
Temper	atures,	degC												
1	25.07	2	25.11	1 3	3 25.	21	4	25.	41	5	25	.87	6	26.14
7	26.38	8	26.61	. 9	26.	.80	10	26.	93	11	27	.03	12	27.09
13	27.13	14	27.14	1.5	5 27.	14	16	27.		17	_	.05	18	26.95
19	26.80	20	26.57	_	_		22	25.		23	_	.95	24	26.43
25	26.70	26	26.85				28	27.		29		.07	30	27.09
31	27.10	32	27.10				34	27.		35		.10	36	27.10
37	27.09	38	27.08		_		40	27.		41	_	.04	42	27.02
43	26.99	44	26.70				46	26.		47		.94	48	27.03
49	27.15	50	27.19				52	27.		53		. 23	54	27.23
55	27.24	56	27.24				58	27.		59		.24	60	27.24
61	27.25	62	27.25				64	27.		65		.14	66	27.53
67	27.95	68	28.10				70	27.		71	_	. 23	72	26.76
73	26.76	74	27.25				76	28.		77	_	.15	78	28.01
79	27.61	80	27.26				82	27.		83	_	.40	84	27.41
85	27.42	86	27.42				88	27.		89	-	.43	90	27.43
91	27.44	92	27.44		_		94	27.	-	95		. 43	96	27.39
97	27.30	98	27.24			05 1		26.					102	27.36
103	27.42		27.46			48 1		27.					108	27.54
109	27.55		27.56			57 1		27.					114	27.58
115	27.58		27.57			56 1		27.					120	27.27
121	27.03		26.58			63 1		26.					126	27.43
127	27.58		27.68			75 1		27.	79	121	27		132	27.80
133	27.77		27.72			64 1		27.					138	27.14
139	26.92		26.68			27 1		26.					144	25.97
145	25.00	_	25.00			00 1		25.					150	25.01
151	25.00		25.02			03 1		25.					156	25.05
157	25.01		25.06			07 1		25.					162	25.09
163	25.10		25.10			11 1		25.					168	25.12
169	25.13		25.14			14 1		25.					174	25.16
175	25.17		25.18			18 1		25.					180	25.20
181	25.21		25.22			22 1		25.					186	25.24
187	25.25		25.26			26 1		25.					192	25.29
193	25.29	_	25.30			31 1		25.					198	25.33
199	25.33		25.34			35 2		25.					204	25.37
205	25.37		25.38			39 2		25.			-		210	25.41
211	25.42		25.43			44 2		25.					216	25.46
217	25.42		25.47			48 2		25.					222	25.51
223	25.52		25.53			53 2		25.					228	25.55
229	25.56		25.57			57 2		25.					234	25.59
235	25.60	_	25.61			61 2		25.					240	25.63
241	25.64		25.65			65 2		25.					246	25.67
241	25.68		25.68			69 2		25.					252	25.71
253	25.72		25.72			73 2		25.					258	25.75
259	25.76		25.76			77 2		25.					264	25.79
265	25.79	_	25.80			80 2		25.					270	25.82
	25.82		25.83			84 2		25.					276	25.86
271 277	25.82		25.87			88 2		25.					282	25.89
283	25.86 25.90		25.90			90 2		25.					288	25.90
283	40.00		25.90		, 45.		-	23.	,,	20/	2.7			

TALSR(M	ETRIC)	RUN	5. COMPI	LEX N	MODEL,	MAS	ss flow	OF	362	2.9 k	g/hr	(80	Page	No. 1
Tempera					•						•	•		, ,
i	25.04	2	25.07	3	25.	1 4	4	25	.31	5	25	.72	6	25.93
7	26.13	8	26.32	9	26.		10		. 59	11		.67	12	26.72
	26.75		26.76								-			
13		14		15	26.		16		. 73	17	-	.68	18	26.60
19	26.48	20	26.28	21	25.		22		.77	23		.73	24	26.17
25	26.39	26	26.51	27	26.		28		. 67	29	26	.69	30	26.71
31	26.71	32	26.71	33	26.	72	34	26.	.72	35	26	.72	36	26.71
37	26.70	38	26.69	39	26.	68	40	26.	. 67	41	26	.66	42	26.65
43	26.63	44	26.37	45	26.	00	46	26.	. 39	47	26	.59	48	26.65
49	26.75	50	26.79	51	26.	80	52	26.	. 81	53	26	.82	54	26.82
55	26.82	56	26.82	57	26.		58		.83	59		.83	60	26.83
61	26.83	62	26.83	63	26.		64		. 80	65		.72	66	27.06
67			27.59	69	27.		70			71		_		
	27.45	68							. 15			.81	72	26.38
73	26.38	74	26.82	75	27.		76		. 58	77		.63	78	27.50
79	27.12	80	26.81	81	26.		82		. 93	83		.95	84	26.96
85	26.97	86	26.97	87	26.	97	88	26.	. 97	89		.97	90	26.98
91	26.98	92	26.98	93	26.	99	94	26.	. 99	95	26	.98	96	26.95
97	26.86	98	26.82	99	26.	66	100	26.	. 28	101			102	26.93
103	26.97	104	27.00	105	27.	01	106	27.	.03	107	27	.05	108	27.06
109	27.07		27.08				112			113			114	27.10
115	27.10		27.09				118			119			120	26.84
121	26.63		26.23				124			125			126	26.97
127	27.10		27.19				130			131			132	27.28
												_		
133	27.26		27.22				136			137			138	26.73
139	26.54		26.35				142			143			144	25.74
145	25.00		25.00				148			149			150	25.01
151	25.01		25.02				154			155			156	25.04
157	25.04	158	25.05	159	25.	05	160	25.	.06	161	25	.07	162	25.07
163	25.07	164	25.08	165	25.	80	166	25	. 09	167	25	.09	168	25.09
169	25.10	170	25.10	171	25.	11	172	25.	.12	173	25	.12	174	25.13
175	25.13	176	25.14	177	25.	14	178	25	.15	179	25	.15	180	25.16
181	25.16	182	25.17	183	25.	17	184	25.	.18	185	25	.18	186	25.19
187	25.19		25.20				190			191			192	25.22
193	25.22		25.23				196			197			198	25.25
199	25.26		25.26				202			203			204	25.28
			25.29				208			209			210	25.32
205	25.29													
211	25.32		25.33				214			215			216	25.36
217	25.36		25.37				220			221			222	25.39
223		224	25.41				226			227			228	25.43
229	25.43	230	25.44				232			233			234	25.46
235	25.46	236	25.47	237	25.	47	238	25	. 48	239	25	. 48	240	25.49
241	25.49	242	25.50	243	25.	50	244	25	. 51	245	25	.51	246	25.52
247	25.52	248	25.53	249	25.	53	250	25	. 54	251	25	.54	252	25.55
253	25.55	254		255	25.	56	256	25	.57	257	25	.57	258	25.58
259	25.59		25.59			-	262			263	25	.61	264	25.61
265			25.62				268			269			270	25.63
271	25.64	272		273			274			275			276	25.66
277	25.67	278		279			280			281			282	25.69
-										287			288	25.70
283	25.70	284	25.70	460	434	/ 0	286	45	. / 0	20/	25	.,0	200	23.75
301	40.00	302	25.00											

LIST OF REFERENCES

- Burmeister, L. C., (1993). Convective Heat Transfer, 2nd Ed., John Wiley & Sons Book Company, New York.
- Garrett, S. L., (1992). <u>ThermoAcoustic Life Sciences</u> <u>Refrigerator:</u> Heat Exchanger Design and Performance <u>Prediction</u>, NASA Technical Report.
- Hamming, R., (1973). Numerical Methods for Scientists and Engineers, Dover Publishing Co., New York.
- Incropera, F. P., and DeWitt, D. P. (1985). Fundamentals of Heat and Mass Transfer, 2nd Ed., John Wiley & Sons Book Company, New York.
- Kays, W. M., and London, A. L. (1984) Compact Heat Exchangers, 3rd Ed., McGraw-Hill Book Company, New York.
- Kern, D. Q., and Kraus, A. D. (1972). Extended Surface Heat Transfer, McGraw-Hill Book Company, New York.
- Kraus, A. D. (1961). Efficiency of the Cold Plate Heat Exchanger, Proc. Natl. Aeronaut. Electronics Conf., Dayton, Ohio, 381.
- Kraus, A. D. (1962). Optimization of the Cold Plate Heat Exchanger, Proc. Natl. Aeronaut. Electronics Conf., Dayton, Ohio, 78.
- Kraus, A. D., Snider, A. D., and Doty, L. F. (1978). An Efficient Algorithm for Evaluating Arrays of Extended Surfaces, J. Heat Transfer, 100, 288.
- Kraus, A. D. (1982). Analysis and Evaluation of Extended Surface Thermal Systems, Hemisphere Publishing Co., New York.
- Kraus, A. D. (1989). Steady State Thermal Analyzer User's Guide, InterCept Software, San Diego.
- Pieper, R. J., and Kraus, A. D. (1995). Cold Plates with Asymmetric Heat Loading Part I The Single Stack, Proceedings of the ASME Inetrpack'95 Conference, Advances in Electronic Packaging, Vol. 10-2, ASME, pp 871-876, March 1995
- Sieder, E. N., and Tate, G. E., (1936). Ind. Eng. Chem., 28, 1429.
- Snider, A. D., and Kraus, A. D. (1981). A General Extended

Surface Analysis Method, J. Heat Transfer, 103, 699.

Vainshtein, P., Fichman, M., and Gutfinger, C. (1995). Acoustic enhancement of heat transfer between two parallel plates, Int. J. Heat Mass Transfer, Vol. 38, No. 10, pp 1893.

INITIAL DISTRIBUTION LIST

		No.	Copies
1.	Defense Technical Information Center Cameron Station Alexandria, Virginia 22304-6145		2
2.	Library, Code 52 Naval Postgraduate School Monterey, California 93943-5101		2
3.	Department Chairman, Code ME Department of Mechanical Engineering Naval Postgraduate School Monterey, California 93943-5000		1
4.	Department Chairman, Code AA Department of Aeronautics and Astronautics Naval Postgraduate School Monterey, California 93953-5106		1
5.	Chairman, Code SP Space Systems Academic Group Naval Postgraduate School Monterey, California 93943-5110		1
6.	Captain Thompson Office of the Chief of Naval Operations Code N63, Room 4E679 The Pentagon Washington, DC 20350-2000		1
7.	Professor Ron J. Pieper, Code EC/Pr Department of Electrical and Computer Engine Naval Postgraduate School Monterey, California 93943-5121	erin	g
8.	Professor Allan D. Kraus, Code EC/KS Department of Electrical and Computer Engine Naval Postgraduate School Monterey, California 93943-5121	erin	g g
9.	Professor Ashok Gopinath, Code ME/ Department of Mechanical Engineering Naval Postgraduate School Monterey, California 93943-5000		1
10.	Professor Oscar Biblarz, Code AA/Bi Department of Aeronautics and Astronautics Naval Postgraduate School Monterey, California 93943-5106		1

11. LT Kevin S. Muhs
PO Box 570021
Orlando, Florida 32857-0021